

Reviewed: Apple's iPod and Microsoft Office v. X for the Mac



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# MacAddict

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FEBRUARY 2002 NO. 66

## IT'S TIME TO SWITCH

OS 9 to OS X

**Do It Now**

We Show You How

Your Complete Upgrade  
Guide Begins on Page 20

### PLUS:

*Exclusive First Look:*  
How Harry Potter  
Will Enchant Your Mac

Make Your Web Site  
Come Alive in 3D

Color Calibration  
(Finally) Made Easy

Wireless Wonders  
Dominate at  
Comdex Expo

### REVIEWED:

Epson Stylus Photo 820

Corel Graphics Suite 10

Giants: Citizen Kabuto

CodeWarrior Pro 7

Nikon CoolPix 885

HP Scanjet 5470c

RioVolt SP250

QuicKeys X

& more...

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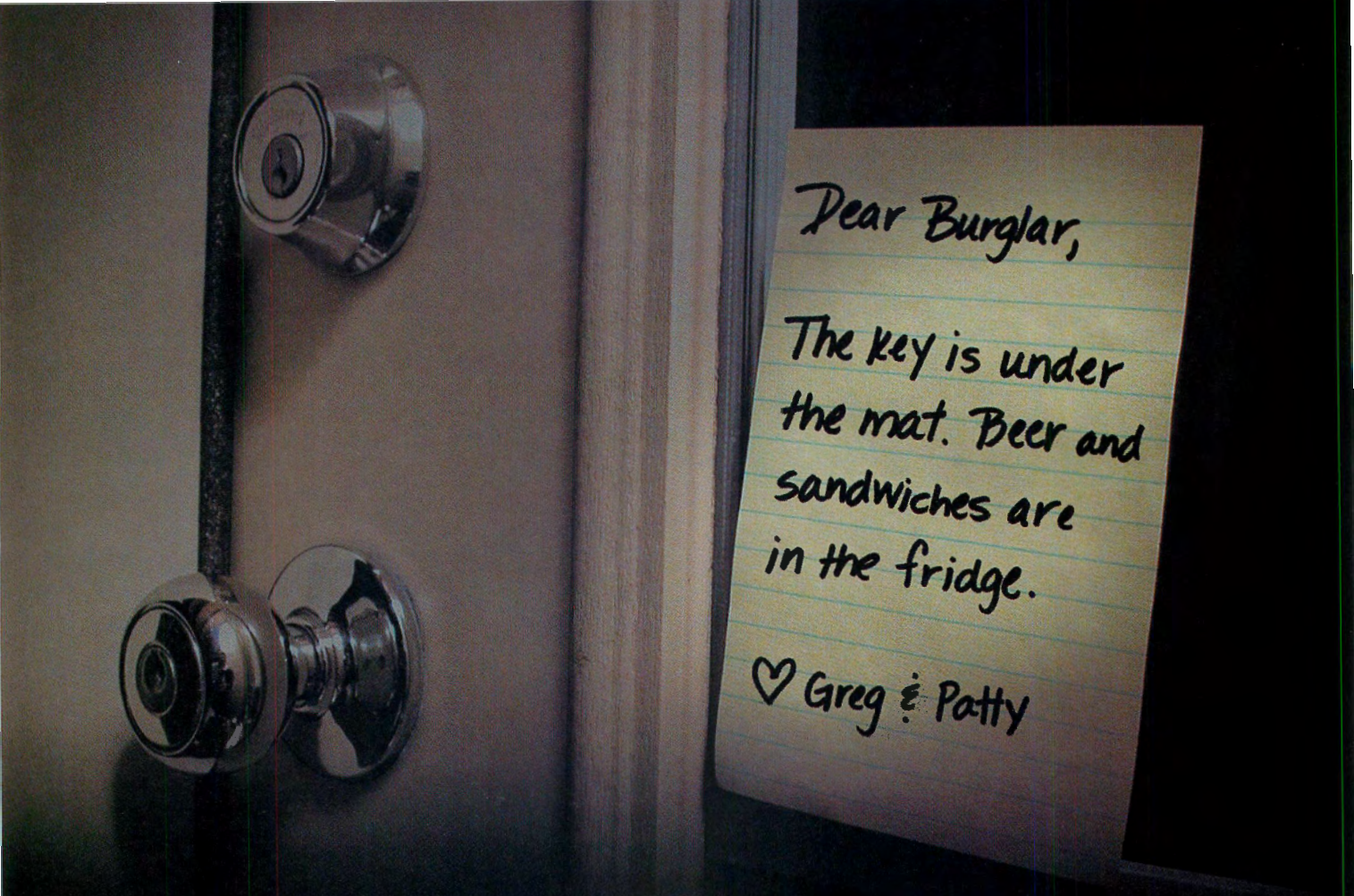




Introducing Microsoft® PowerPoint® X, just part of the new Office v. X for Mac. We redesigned Office for one reaction, and one reaction only—total awe. By throwing out stale, irrelevant code, we created the most stable, most responsive Mac version yet. As a truly native application, it dazzles with the brilliant Aqua interface through and through. The new PowerPoint even saves presentations as QuickTime movies. This is one Office that won't leave you fumbling around in the dark. [microsoft.com/mac](http://microsoft.com/mac)

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v. X





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sandwiches are  
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♥ Greg & Patty

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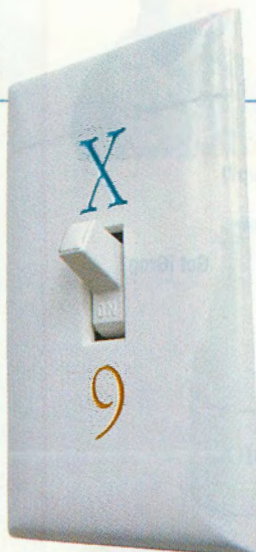


## highlights

### 20 It's Time to Switch

It's official: Mac OS X is now the Operating System of Choice for Mac users. Sooner or later, you *will* have to get over your separation anxiety and part ways with Mac OS 9. Why not make it sooner? We're here to help, with answers to more than 40 vital questions about how you can seamlessly transition from Mac OS 9 to Mac OS X. So start saying your good-byes—and your hellos.

by Jeff Pittelkau



Let there be X!

### 31 Make a CD Gift

The holidays may be over, but the time of giving is always with us, whether it's your mother-in-law's birthday, Valentine's Day, or Great-Grand-Uncle-Once-Removed Day.

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by Rick Sanchez



I like you, um...package.

### 37 3D on the Web

Have you noticed that the Web has gotten a little flat lately? Well, it's time to get back some of that old WWW fizz. No, we won't tell you how to make a million bucks without a viable business plan, but we will tell you how to produce eye-catching 3D graphics and interactivity that will impress even the most jaded—and unemployed—dot-commer.

by Patrick Baggatta

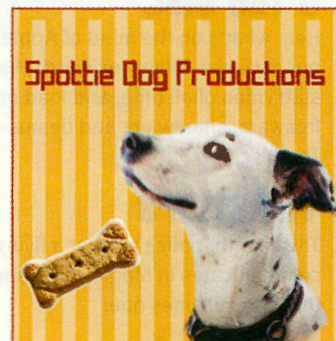


Close encounters of the 3D kind.

## how to

### 64 Design a Logo

Hundreds of thousands of businesses coexist in the world, and it's easy to get buried by gigantic corporations. While you may not be able to compete with the big boys dollar for dollar, a winning logo can create the illusion that your small-potatoes freelancing gig is a major player. We show you how to design your own logo to give your business a visual identity. by Leigh Webber



Give me the damn cookie already.

### 72 Keep Color Consistent from Pixel to Print

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Is that buttered-popcorn or earwax flavor?

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## every month

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Microsoft pushes our editor in chief over the edge.

### 8 The Disc

Hear what's on the mind of Apple co-founder Steve Wozniak in our exclusive interview, watch the most special-effects-filled staff video of all time, and load up on our usual boatload of freeware, shareware, and demos—all in this month's edition of The Disc.

### 10 Letters

This month, police recover a flying Mac, a Zip drive communicates in Morse code, and a girl loves iMacs so much that she becomes one.

### 12 Get Info

Cesar is burning MP3s. Dilbert has swallowed your mouse. The Pittsburgh Penguins are shooting DV movies. Mac fans spend over \$30,000 to make their own Apple commercial. Read on for more Mac craziness.

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Meet the mouse that can see in the dark.

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### 62 Powerplay

Guess who's coming to your Mac? It's that zillion-dollar wizard kid in round-rimmed glasses. We share our sneak peek at Aspyr's upcoming game, Harry Potter. But if all this Potter publicity has you ready to jump into a goblet of fire, we also have the lowdown on good ol' Spidey and three new games from shareware gods Ambrosia Software.

### 76 Ask Us

Want to snag songs from audio streams, sync your non-iPod MP3 player to iTunes, send bulk email, or let your PC pals climb aboard your AirPort network? Too bad, we're not gonna tell you how. Well, not here at least. You'll have to turn to page 76. Go on...really...why are you still here?

### 96 Shut Down

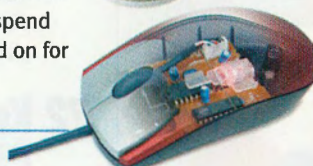
The Macworld Expo is once again upon us, and by golly, this year's crop of cool new Mac stuff is staggering. Then again, we did notice the absence of a few high-profile players...



Wozzup?!



Got iGrog?



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# editor's note

*I hate Microsoft. There, I said it.*

I am writing this *Editor's Note* in late November 2001, only a couple of days after Microsoft announced its self-serving "settlement" of the longstanding brouhaha between Redmond's convicted monopolists and the noble army of pure-minded folk who have had the temerity to challenge the will of Bill.

In case you missed it, here's the gist: Microsoft has offered to settle the avalanche of lawsuits directed at its monopolistic arrogance by a bribe of "more than \$1 billion in cash, training, support and software to help make computer technology more accessible to public schools serving nearly 7 million of America's most economically disadvantaged children."

Microsoft has suddenly developed a social conscience? Yeah, and I'm the queen of Romania.

Let's take a closer look at the company's purported largess. Microsoft proposes to set up a foundation, funded by \$150 million of its own cash and an additional \$100 million to match "donations from other sources" (read "extortion from brown-nosing business partners"), that will "provide sustainable, long-term funding for information technology for underserved schools." It will also provide \$160 million for "technology support programs," \$90 million for training, and will make available "at least 200,000 [refurbished] Pentium-class PCs and Macintosh computers" for \$50 each. Finally, Microsoft will supply "a wide range of education and productivity software" in a program whose value "may well exceed \$500 million."

Call me cynical, but how much of that money do you think will be used to acquire, service, or provide software or training for Macs? Check out the Windows software Microsoft is offering: Windows XP Professional, Windows 2000 Professional, Office XP Standard, Office 2000 Standard, Creative Writer, My Personal Tutor, the Magic School Bus, Encarta Reference Library, Visio Pro 2002, Front Page 2002, Publisher 2002, Project 2000, Visual Studio.net, Visual Basic, and Visual C++. For the Mac? Office and 6 of the 11 Magic School Bus CD-ROMs. Big whoop.

If you're a cash-strapped school



**A fellow Comdex-goer once told Rik that he looks like Bill Gates's fat older brother.**

administrator, which software selection will you find more enticing? Also, Microsoft is offering subscriptions to its TechNet technical-support program—and one can assume OS X support ain't part of that service, bucko.

Let's face facts: This pseudo-altruistic move is a thinly veiled marketing ploy and market-share grab. If it's approved, Microsoft will wiggle cheaply out of its legal troubles while foisting Windows on a generation of impressionable kids from families and schools that can't afford to turn the offer down.

Oh, yeah—this agreement stabs Apple in the back as well. Microsoft and its PC partners have long envied Apple's hard-earned educational dominance. Now they're doing an end run around their own incompetence by hooking impressionable kids with the same "The first one's free" strategy that's so popular with schoolyard crack dealers.

A couple of months back, executive editor Cathy Lu and I pondered how to frame her story about Microsoft's Macintosh Business Unit (MacBU), the merry band of Mac addicts fighting the good fight deep in the bowels of The Beast. After much discussion, we decided to focus on the MacBU's high-quality software and firm embrace of Mac OS X (see our review of Office v. X on page 42), and not on the rapacious, soul-blighting, mendacious greed of Emperor Bill and his evil megaminion, Steve, Duke of Ballmer. Her story ("Renewing the Faith," Oct/01, p38) began, "We love Microsoft. There, we said it."

If we wrote that opener today, we'd say: "We love the MacBU; we hate Microsoft." There, I said it.—*Rik Myslewski*

## Staff Rants



**Cathy Lu**

### **Black-Belt Wannabe**

**Q.** If you were trapped in an elevator with Bill Gates, what would you do?

**A.** I'd kick-box him and steal his wallet. Duh. Wouldn't you?

**Q.** If you ran Microsoft, what would you change?

**A.** I'd hire a personal nurse to administer Valium to CEO Steve Ballmer before he made any public appearances.



**Niko Coucouvanis**

### **Staff Sommelier**

**Q.** If you were trapped in an elevator with Bill Gates, what would you do?

**A.** I'd eat his liver—with some fava

beans and a nice Chianti. Unless we were trapped for just a short while, in which case I'd quick-fry it and go with a Cabemet. Then I'd steal his wallet.

**Q.** If you ran Microsoft, what would you change?

**A.** The locks on all the executive washroom doors. Actually, I'd restructure the whole company around the Mac Business Unit.



**Leslie Brown**

### **Keeper of the Keys**

**Q.** If you were trapped in an elevator with Bill Gates, what would you do?

**A.** After my enchanted harp put him to sleep, I'd tie

his shoelaces together and steal his wallet. Then I'd escape, dodging his drool and his three heads, and land on the piles of gold beneath the trap door.

**Q.** If you ran Microsoft, what would you change?

**A.** I'd sell it to Apple, take the money, and buy the kiddies a few million new Macs. Then I'd start a nationwide "Break the Windows!" campaign.





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**Tropico:** This island is mine—all mine!



**Strata 3D:** We made this in less than 5 minutes...really!



**ZBrush:** This is what the Disc editor sees in the mirror every morning.



**Wingnuts:** It's fun to shoot down the Baron—especially because it makes all those pretty colors!

## Tropico Demo

It's good to be a dictator—especially when you wake up in the morning, look outside your plush three-story mansion, and see your adoring people... whoops. They don't look quite so happy. You'd better provide your tropical islanders with food, housing, and entertainment so they'll continue to labor for you with smiles on their faces. They have the power to overthrow you, after all. Who ever said dictatorship was easy?

## Strata 3Dbase

This classic 3D graphics application is yours to keep, free of charge. The designers of the original Myst used Strata 3D to create the game's beautiful world, so what better way to start designing your own 3D? Build and shape 3D models to your heart's content and render your images using the famed high-quality Strata renderer.

## ZBrush Demo

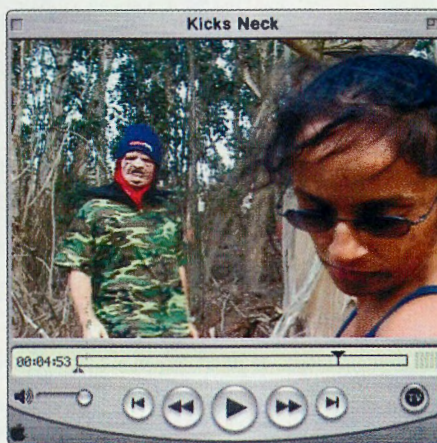
If you're not ready to delve into the intricacies of 3D modeling, you can mimic 3D in 2D. ZBrush gives you the ability to *paint* 3D shapes and objects by utilizing intuitive brush strokes and tools rendered in real time—and you don't have to know what lathing and lofting do. Give ZBrush a 21-day trial and see what you can create.

## Wingnuts Demo

"What exactly is a Wingnut?" asks the Baron as his bullet-riddled winged armada falls from the skies. *You* are the Wingnut—a special pilot sent on a mission to hunt down your nemesis, the Baron. Packed with colorful graphics, awesome music, and amazing particle-explosion effects, this game is an adrenaline rush all the way. Freeverse Software's expected wit is sure to entertain you while you're saving the world.

### Exclusives!

A 55-minute radio interview with Apple co-founder Steve Wozniak on "Best of MacShow Live," volume 8; all-new Nitrozac comics; special home video of the MacAddict.com forum moderators; and a high-resolution version of the incredible Apple Core trailer.



**Lara Croft meets...who is that masked man?**

This month's staff video tops all previous staff videos. It's packed with special effects, never before attempted by anyone here at MacAddict. This month our unsuspecting editors get sucked into a video-game world, where they're transformed into their favorite game characters. With a little CG and time, almost anything is possible.

If you don't receive The Disc with your copy of MacAddict, you might want to consider upgrading! Each monthly Disc has cool demos, useful shareware and freeware, and the inimitable MacAddict staff video. To get 12 issues of MacAddict that include this value-packed Disc with your subscription (prorated if necessary) for just \$10 more, call 888-771-6222—the operator will take care of everything.



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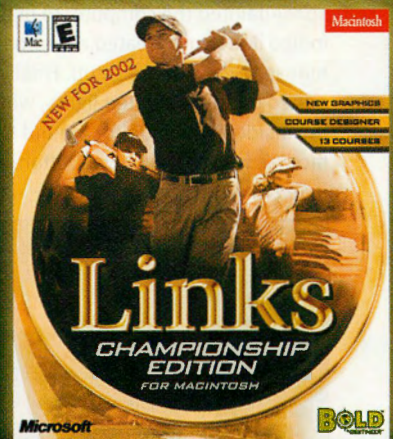
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# letters

Who says letter-writing is a lost art?

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## A LONE MAC IN A PC SCHOOL

I am 12 years old, and I simply love the Mac. I go to a private school where PCs are the main computers. In fact, the only Mac that's there is the iBook I take to school. I spend day and night convincing my schoolmates and friends that Macs are better computers (which they obviously are). I've loved Macs all my life. When I was one, my dad bought a Macintosh Portable. I loved it and played on it for years. I am now a major iTunes 2 junkie. I have over 2,000 songs on a 100GB hard drive. I have also made over ten movies with iMovie. Thanks for keeping a great magazine going.—*Austin Bell*

## ITRICK OR TREAT

My daughter Lauren had the bright idea of dressing up as an iMac for Halloween. We built a frame out of wood-furring strips, hot-glued cardboard to it for additional support, and then glued inch-thick foam to the cardboard to create the shell. We then spray-painted the computer to match the Indigo iMac, and created a keyboard and mouse to go with the setup. Finally, we added battery-operated lights, which lit up the inside of the monitor around Lauren's face, as well as the power button.

—*Ken Brown*



Life's good when you can dress like an iMac.

## ALL HAIL THE FLYING MAC

One afternoon I hastily packed my PowerBook, book bag, and briefcase, and headed out to the parking lot, hoping to beat the worst of the traffic on the way to grad school. When I arrived, I realized I had left my treasured PowerBook on the roof of my car. What happened next convinced me that God has a Mac on His desk.

Sometime after my PowerBook's inaugural flight, a police officer found the machine lying on the side of the road. I picked it up at a Weston, Connecticut, police station, and after a thousand thanks to several underappreciated officers, I took my baby home. Other than a loose hard drive and some grass stains on the laptop bag, the machine was unscathed. And to prove it, I am writing this letter from that very same Mac.—*John Tusch*

## BLINKING SISTER

A year or so ago I bought an iMac SE and an external Iomega Zip drive. I noticed that when I shut down the iMac, an internal yellow-orange LED on the Zip drive flashed, seemingly at random. When the iMac was running, the light would remain on steadily. Then it hit me! The blinking was Morse code. I recognized it because in the early years of my misspent youth I was an avid amateur radio ham and learned the code to get a license. I grabbed a pen and wrote down the message: "sis you rock." I wonder whose sister she is?—*Don*  
*We have no idea. We contacted Iomega about it, but we never heard from the company. Perhaps a sister from another dimension is channeling communications through your Mac.*—*Ed.*

## X MARKS THE SPOT

In your review of American McGee's *Alice* (*Reviews*, Nov/01, p60), you don't mention until the end of the article that it will run on Mac OS X. I have been using OS X at home since its debut and I plugged through the poky 10.0.4 version, vowing that if Mac OS X version 10.1 didn't include many improvements, I was going to switch back to Mac OS 9.2. Well, I feel that 10.1 is a major improvement, and I am sticking with it. Can you find it in your hearts to indicate Mac OS X compatibility up front in your

## Recently Sighted



My cat Twiggy loves iTunes.—*Scott Rose*

product reviews? You often say the system requirements are "Mac OS 8.6 or greater," but these products do not run on OS X. I am looking to the future and I want to support OS X software makers. If you had listed OS X compatibility up front for McGee's *Alice*, I would have purchased it weeks ago.

—*David Trotsky*

*As of this issue, we're adding easy-to-spot icons in the margin of each review, indicating whether the product is compatible with OS 9, OS X, or both.*—*Ed.*

## A NOT-SO-GNU DEBATE

T. Neil Sroka's piece "The Gnu, Gnu Thing" (*Scrapbook*, Nov/01, p20) shows the same selective naïveté that pervades the thinking of way too many music fans and computer users. Napster and Gnutella use wonderful technology, but whatever happened to adequate compensation for artists? Until music copyright issues are resolved so that artists won't have to starve to death or flip hamburgers to stay alive, Napster and Gnutella are nothing more than licenses to steal.—*Peter Fergus-Moore*

## MACS EVEN LET YOU SKIP SCHOOL

Hey, *MacAddict*, I would like to tell you where the Mac has gotten me in life. Because of the Mac, I've been able to skip three grades—all of middle school. And get this: I'm 12 years old! Bwahaha! Now for my systems: I have nine Macs! Please put me in the magazine. It would be my dream come true.—*Scott Goodson*



## EXPLORING UNSUPPORTED TERRITORY

I thought it was interesting that you used Linksys's EtherFast BEFSR41 router to set up your network in "How to Hitch a Ride on Any Broadband Line" (Dec/01, p70). This company does not support Macs. You can use its routers with Macs, no problem—especially after you've read the article—but Linksys will not help a Mac user. The company's tech-support reps told me I should return my router to the shop where I bought it, as they could not help me set up the router with my iMac! This story is strange, but very true.—Kev

## WHEN YOU CARE ENOUGH TO BUY THE VERY BEST DOG BED

Our dog Belle had five Shih Tzu puppies in her custom-made birthing bed, which cost us a mere \$999.—Nate Swenson



If you want your children to be Mac addicts, you have to start them out right.

## PAPER DOLLS

I don't know if that little Steve Jobs doll on the *Shut Down* page (Dec/01, p96) was supposed to be a joke, but I actually did cut it out. He's rather fun to play with. Now all I need is a Bill Gates cutout so I can make Steve kick his @\$\$!!—Elisha Hardy

## YOU SAY POTATO, WE SAY POTAHTO

In your recent article about AppleScript, you said that the plural of OSAX (AppleScript Scripting Additions) was OSAXs; however, the form OSAXen is almost always used.—David McCabe

## SONY BALONEY?

In your "PDA Roundup" article (*Reviews*, Dec/01, p48), you stated that the Clie PEG-S320 requires The Missing Sync software to hot-sync to the Mac. This isn't true. All OS 4.0 Sony handhelds sync perfectly out of the box, but they require version 2.6.3 of the

Palm Desktop software. Only the older OS 3.x handhelds require The Missing Sync. Sony doesn't support the Mac very well, but I really do like my Clie.—Ian Goodfellow  
*At the time we reviewed the Clie PEG-S320, it required third-party software for hot-syncing. Since then, users report that some Clie models hot-sync directly to Palm Desktop 2.6.3 or higher.—Ed.*

## A BUFFALO SOLDIER

"How to Hitch a Ride on Any Broadband Line" (Dec/01, p70) was a nice article. One product that deserves a mention because of its price and ease of hookup is the Buffalo AirStation, a small beige microtower with a street price of about \$190. It's Mac compatible but doesn't offer official Mac support. If your cable modem supplies a DHCP IP address, the AirStation inputs the IP address in default mode. I did have to make one tech call because I had questions about the correct startup order for the device hookups and power-on sequences, but I'm very happy with the AirStation so far.—J. Stephen Huff

## KEEP THE LETTERS REAL, PLEASE (NOT THAT WE DON'T BELIEVE YOU)

I've been reading your magazine since it started. I remember that day so well. I was only seven years old. My mom got in the car and said she had found this new Mac magazine called *MacAddict*. I opened it as she drove toward home, when suddenly a weird cyborg jumped in front of the car. My mother crashed into it, but it didn't stop! It came toward my side of the car, ripped the door off, and ordered me to give it my

*MacAddict*. I said, "Not bloody likely!" and inserted the CD-ROM into the mouth of the cyborg, and it blew up. I think it was one of those Bill Gates attack drones. That's how I remember it, anyway.—Seann Gracie

## MAC DECOR

My nana crocheted this cool cushion with the Apple logo in Graphite. I'm sure she committed some kind of copyright infringement, but I'm hoping they'll go easy on her.—Sven Lavine



That would look so nice with a new iPod.

## THIS DILEMMA IS MIND NUMBING

I just had to laugh! I mean, there I was, standing there at the bathroom sink, trying not to move, waiting for my legs to come back to life so I could walk again, when I read Robert Westmoreland's letter about how he sits and reads *MacAddict* in the bathroom for so long that his legs go numb (*Letters*, Dec/01, p14). Do you know how hard it is to laugh without moving something?—Whit Landvater

## You Know You're a Mac Addict When...

...you go home for the holidays and wish everyone a merry Ten-mas.—Sean Alexandre

...you're the first one at the mall in the morning, just to see if the Apple Store's logo pulses at night.—Tom Foerster

...you could've sworn that you saw Steve Jobs's head carved on Mount Rushmore.—Daniel Cuatt

...you get nervous when writing by hand because you can't press Command-S.—Ben Apollonio

...you use Sherlock to try to find your keys.—James Elliott

...you travel four hours in an overfull taxi (a minivan holding 17 people) so you can use an LC III to get online and spend a good portion of your monthly income on an overpriced, out-of-date *MacAddict*.—Jed White (Lesotho, Africa)



## It's a Wireless World

Comdex 2001 Shows Off Tomorrow's Technologies

If Comdex 2001 is any indication, our future is one without cords. The annual Las Vegas trade show unveiled a myriad of wireless standards and gadgets that will be available soon. While Comdex is not a Mac show (you can tell by the pervasive aroma of Windows XP), it still gave us a taste of what's headed our way.

### Wireless Standards

Do too many wireless variants spoil the broth? Or do watched technologies never boil? Either way, Comdex showed off three wireless-networking standards. With multiple standards vying for the market's attention, it's still not clear whether one standard will emerge as dominant or whether we'll see a slew of competing wireless protocols.

First is the popular 802.11b standard, which operates at 11 Mbps. Apple's AirPort is based on 802.11b, making it easy for companies to port their existing wireless peripherals (such as print servers) for Mac customers.

Secondly, a group of tech heavyweights including Cisco Systems, Intel, and 3Com has released wireless technologies based on a new 802.11a standard, which experts say runs as fast as 54 Mbps—five times

faster than 802.11b. The fledgling 802.11a is not compatible with 802.11b, requiring that users purchase new hardware. The California-based company Proxim currently manufactures 802.11a wireless access points and PC Cards, but offers only 802.11b products for the Mac.

To confuse matters further, the IEEE (Institute of Electrical and Electronics Engineers) has approved a standard called 802.11g. The appeal of this third strain is that it is backward compatible with 802.11b hardware like AirPort but offers the speed of 802.11a. The technology is so new that no products currently support 802.11g.

### Wireless Gadgets

If the battle over wireless standards seems a little esoteric and, well, boring to the average Mac consumer, the demos of wireless gadgets should be enough to wake you up. Comdex saw a slew of cool prototypes. Hopefully some will actually survive product Darwinism and make it to store shelves. (See "Where Are They Now?", below, for a look at the whereabouts of last year's Comdex darlings.)

Swedish company Senseboard Technologies demonstrated a virtual keyboard called the Senseboard. The user

slips on two sensors, which look like handgrips on a roller-coaster ride, and starts typing on any surface. The sensors register your finger movements and translate them to characters on your PDA or laptop computer.

While Handspring showed off the Treo, its hybrid PDA and cell phone (see *Get Info*, Jan/01, p16), Samsung stole the show with its SCH-M220 TV cell phone. Samsung has embedded a 1.8-inch LCD into a flip-top handset with built-in TV receiver. The device offers 170 minutes of talk time and 200 minutes of TV play time. Samsung will release the phone, which also functions as a PDA, in Asia in early 2002.

Ricoh demonstrated the iMove, a digital camera that can transfer pictures using Wi-Fi wireless networking. Sony showed off the Network Handycam IP, which allows users to send and receive video clips through Bluetooth devices (such as cell phones and modems) without the need for a computer.

Comdex also displayed the usual sampling of tablet PCs, wearable PCs, and—new this year—origami PCs. We'll believe them when we see them somewhere other than on a trade-show floor. Still, it looks like wireless is here to stay, leaving us with the question of what to untangle when we want to procrastinate.—NR



Viva Las Vegas and Comdex 2001's wireless gadgets.

PHOTOGRAPH BY GORDON LING

## Where Are They Now?

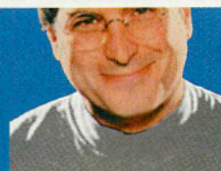
Every year, vendors at Comdex unveil seductive technologies that leave everyone cheering on the outside but wondering on the inside whether the prototypes will evolve into viable products. It's hard to say, but here's what happened to the best of Comdex 2000 during the past year.

Product	Microsoft's Tablet PC	NVidia's GeForce2 Go	Gateway's Connected Touch Pad with Instant AOL	Ricochet wireless network
2000	Won Comdex's Best Vision of the Future	Won Comdex's Best Wireless/Mobile Product	Won Comdex's Best Consumer Product	Won Comdex's Best Service
2001	Keep dreaming. Despite Bill's promises, it's still a vision.	GeForce2 Go became available in August 2001. nVidia announced a new rev at Comdex 2001.	After mediocre sales, Gateway discontinued the product in October 2001.	The now-defunct Metricom sold Ricochet to Aerie Networks, which may or may not revive it.

## Incredibly Unreal Macworld Expo Predictions

San Francisco's Macworld Expo 2002 is breeding the usual flurry of credible and incredible predictions of what Apple will unleash unto its rabid fans. We decided to err heavily—and we mean *really* heavily—on the side of the incredible.

**One Crazy Prediction**  
Steve Jobs will "think different" before delivering his keynote address—by donning a charcoal-gray turtleneck instead of a black one.





# Maccessorize!

## Warm Fuzzy Things That Dress Up Your Mac

**Y**our Mac is good-looking. Your peripherals are good-looking. Heck, even *you're* good-looking. But why is your TiBook or iBook moonlighting as a crash-test dummy in that bum-ugly sack? With a little extra thought and cash, you can treat your cherished devices more carefully—and show some style while you're at it.—NR

### MacCase for PowerBook G4

Kusuma Enterprises, [www.jambags.com](http://www.jambags.com), \$74.95

This Titanium-colored nylon shoulder bag cushions your PowerBook G4 in style. It has a zipper closure and four pockets.



Whoever said Titanium is this year's black was so right on.

### Mobility 2

Brenthaven, [www.apple.com](http://www.apple.com), \$99

This nylon-padded bag designed for the iBook has two compartments, plus pockets for a PDA, cell phone, DVDs, Zip disks, cables, and batteries. The Mobility 2 is available only through Apple and Apple resellers.



Or maybe this year's black is actually black.

### CoolPad

Road Tools, [www.roadtools.com](http://www.roadtools.com), \$29.95

Working on a laptop can crunch your spine like an accordion at Oktoberfest. For more ergonomically correct posture, try the CoolPad, which elevates your iBook to a comfortable height and creates a space beneath it for heat dissipation.



Like the similarly named Cool Whip, the CoolPad's a lightweight way to sweeten your experience with pie (charts).

### Laptop Screen Protector

Other World Computing, [www.macsales.com](http://www.macsales.com), \$14.95

This seemingly simple leather rectangle will prevent that nasty gridlike imprint your screen leaves on the LCD display. Just place it on top of your laptop's keyboard when you close it.



It's the manta ray of laptop accessories.

### Scott eVest

Technology Enabled Clothing, [www.scottevest.com](http://www.scottevest.com), \$199.99

With 15 Velcro and zipper-close pockets, the water-repellent Scott eVest holds cell phones, PDAs, cameras, CD players, keys, and even beverages. Special conduits hold wires in place, and collar loops hold earphones in place.



Wearing all of your gadgets at once sure can get hot, so the eVest has a vented back.



Who is that masked mouse, anyway?

### The MouseMask

Right Brain Ideas, [www.mousemasks.com](http://www.mousemasks.com), \$6.99 to \$7.99

The MouseMask will protect and decorate mice that are predisposed to colds, flus, and sticky jelly stains.



### Would You Like Fries with That?

In an effort to support energy conservation, Apple will replace the iBook battery with one that runs even hotter, allowing users to use the iBook not only as a heating pad, but also to reheat leftovers.

### And This Year's Acronym Is...

In a surprise announcement, Apple releases a 42-inch Imax display, which uses a new video port called the ADH—an acronym for which the company hasn't yet developed a name.

## newsNOOK

### Want Traffic? Report the News

More than 50 million people visited news Web sites in September 2001, according to Jupiter Media Metrix. CNN.com received 24.8 million unique visitors in September, up 141 percent from the previous month. A few local news sites, including *Firehouse* magazine's [Firehouse.com](http://Firehouse.com), received more than 200,000 unique visitors.

### Hot for FireWire

Mac users love FireWire, and it's nice to know that in the face of USB 2.0, so does everyone else. Cahners In-Stat Group reported that over 35 million PC-based and consumer-electronics products incorporated a FireWire interface in the year 2000. Cahners expects this number to exceed 200 million by 2005.

### Your DVDs. To Go.

Sony unveiled a new in-car DVD and CD changer called the DVX-DVD 100, which can store and play back up to ten DVDs or CDs. This mobile movie device will cost \$1,000 and should be available by the time you read this.

### Backup Batteries

For those who forget to charge their camera battery, Electric Fuel offers the Instant Power camcorder battery, which provides up to 10 hours of extra battery life—just connect it to your camera's DC jack. The batteries range from \$14.95 to \$24.95. Visit Electric Fuel's Web site at [www.electric-fuel.com](http://www.electric-fuel.com) for more information.

### iPod for Windows

Apple's probably not complaining about Mediafour's development of software that will make the iPod compatible with Windows Me, 2000, and XP. A public beta of the XPod is due out soon. You can check Mediafour's Web site at [www.mediafour.com/products/xpod](http://www.mediafour.com/products/xpod).

### Emphasis on World

Native English speakers no longer make up the majority of Web users, representing only about 45 percent of the online community, according to a 2001 U.S. Internet Council survey. The survey also reports that Japanese speakers make up 10 percent of the online population, while Chinese speakers comprise 8.4 percent, surpassing all the European languages.



# droolWORTHY

*Sexy Stuff We Can't Wait to Get Our Mitts On*

## YP-30S Yepp Digital Audio Player

Samsung [www.samsungyepp.com](http://www.samsungyepp.com) \$169

**W**ith the iPod's white brilliance blinding you, it's easy to ignore other attractive MP3 offerings like Samsung's YP-30S Yepp Wearable Digital Audio Player. This portable is a mere 2.5 inches tall by 1.7 inches high and offers 64MB of internal memory and a voice recorder with 4 hours of recording time. The little beauty comes with an LCD and a graphic equalizer providing four presets, and it reportedly downloads music via USB at 7 MBps. Although the Yepp will not sync to Apple's iTunes, it comes bundled with RioPort Music and Samsung's Yepp Explorer Mac software. The Yepp works with Mac OS versions 8.6 to 9.1 but not Mac OS X.—NR



Yepp, we want one.

## Cesar-CDRW/MPM

Archos [www.archos.com](http://www.archos.com) \$249

**A**t 5.3 inches in diameter, this 8X write/8X rewrite/24X read CD-RW is not much wider than the CD itself. The Mac itself powers the slippery silver drive via USB 2.0 or FireWire. You pick which interface you want. Archos plans to charge the same price for FireWire and USB, so take a stab at which is the better deal. The Cesar should be available by the time you read this.—NR

Hail Cesar! This portable CD-RW is royally cool.



## Shareware Pick of the Month

icWord 2.0

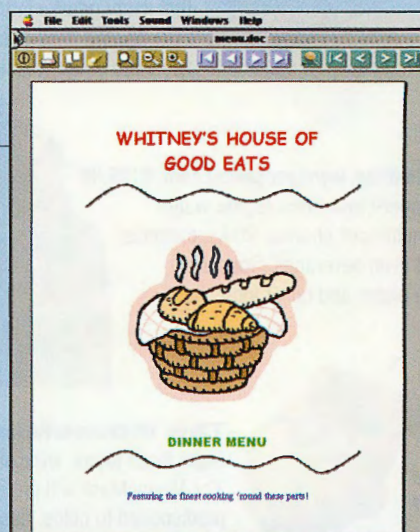
PRICE: \$19.95 (download)  
URL: [www.icword.com](http://www.icword.com)



Find icWord  
2.0 on  
The Disc.

**M**icrosoft resisters, unite! Panergy, an Israeli software company, has freed you from the .doc confines of Microsoft Word with its icWord app. icWord opens documents created in any version of Microsoft Word for the Mac or PC without doling out a fortune to the Gates empire. Once you open your file in icWord, you can export it to AppleWorks 5 or 6 and save it in RTF (Rich Text Format). The app's WYSIWYG interface lets you see the document's original formatting—including adjusted margins, tables, bullets, and graphics. Unfortunately, you can't see paragraph styles from Word versions 4.0, 5.0, and 5.1 for the Mac.

icWord comes with a search function, text-to-speech capabilities, and a zoom of 25 to 400 percent. Version 2.0 works on System 7.1 and later, but is not yet optimized for Mac OS X. The full version costs \$19.95; a free demo is available for a 30-day trial.—Whitney Hess



We opened this  
Microsoft Word  
document  
without using  
Microsoft Word.

## Incredibly Unreal Macworld Expo Predictions

### ID Please

Apple will introduce the iGrog, an herbal elixir spiked with an exotic alcohol. This New Age, ultrahip health cocktail comes in a simple, attractive 14-ounce white plastic bottle.



### A Vote for Quark

Macworld Expo will bring Mac users products we thought we wouldn't see for years—thought-powered G5s, PowerBooks that roll up like yoga mats, paper-thin PDAs, and a final version of QuarkXPress for Mac OS X.





## Apple Fans to the Core

### Aspiring Filmmakers Show Apple What a Commercial Ought to Look Like



Find the Apple Core movie on The Disc.

**T**alk about the ultimate Mac fan film. Filmmakers Mubarik Ahmad and Ajmal Zaheer Ahmad and their crew spent about \$34,000 creating their own Apple TV commercial. The result is Apple Core, a minute-long sci-fi adventure about a cast of superheroes who are humanity's last defense against The Gate, a maniacal entity out to exterminate the human race.

The film caused a stir on the online movie site iFilm ([www.ifilm.com](http://www.ifilm.com)), where it received 10,000 views in one week. "That's very good," says David Brakka of iFilm. "A lot of films that go up in the first week are lucky to get 300 views."

Why an Apple-ad spoof? "We're Mac fans," says Mubarik Ahmad, "but we have a different idea for advertising than Apple does." The team was careful, however, not to invoke the wrath of Apple's legal team. Its Apple Core logo, reminiscent of Apple Computer's logo, has two bites instead of one.

As expected, the crew produced Apple Core on the Mac, although the final output was to film. Editing took place in Final Cut Pro, sound in Pro Tools, 3D work in Electric Image Universe, compositing in After Effects 5, rotoscoping in Commotion 3.1, and artwork in Photoshop 6.

For more information on Apple Core, see its futuristic Web site at [www.applecore.tv](http://www.applecore.tv).—NR

One bite instead of two in the Apple Core logo walks the fine line between creative freedom and a lawsuit over copyright infringement.



The Apple Core is out to save the world—and to land a contract with Apple to make Mac TV commercials.

The Name's Free Now That the Grocer's Gone Apple brings iMac-style colors to the iPod but chooses to go with vegetable dyes instead of fruit flavors. First entry: the peaPod.



### Now Who's the Evil Empire?

Apple will announce that with every new Mac it will bundle its free iSoftware iSuite, including iPhoto, iPress, iQuicken, iNorton, and iRetrospect. Apple's stock will double while Adobe, Quark, Intuit, Symantec, and Dantz file for bankruptcy and join MP3-player manufacturers in the pursuit of new employment.

## new STUFF

### AirPort 2.0

Apple, [www.apple.com](http://www.apple.com)

AirPort 2.0 offers AOL compatibility, two Ethernet ports (one for the Internet, the other for LANs), firewall protection, support for 128-bit encryption, Radius support for managing user access, and compatibility with Cisco's LEAP security. Available now.

### Oxygen 8 USB MIDI Controller

MidiMan, [www.midiman.net](http://www.midiman.net), \$179.95

The Oxygen 8 comes with eight programmable rotary knobs for transmitting MIDI control values on any MIDI channel. It also features a data slider, mod wheel, and pitch wheel. It should be available by the time you read this.



Oxygen 8 is the latest USB MIDI product from MidiMan.

### MacVCD 3.0

Mireth Technology, [www.mireth.com](http://www.mireth.com), \$15 (single user)

This software lets you play video CDs on the Mac with support for track and chapter selection as well as multilanguage and karaoke soundtracks. MacVCD 3.0 is available now for Mac OS 8 and 9. A preview release is available for Mac OS X.

### MiniCDRW 2 (16X10X24)

Archos, [www.archos.com](http://www.archos.com), \$199

This slim CD-RW is USB 2.0-compatible. It should be available by the time you read this.



This UFO-style device burns music and data CDs.

### Creator 6

Multi-Ad Services, [www.multi-ad.com](http://www.multi-ad.com), \$750 (\$99 for LE)

Designed initially for professional newspaper and ad-agency designers, Creator 6 combines page-layout, drawing, illustration, text, and image-manipulation tools in one application. A lower-cost light version (LE) is available for \$99. Creator 6 and Creator LE are available now for Mac OS 9 and X.

### iDVD 2

Apple, [www.apple.com](http://www.apple.com), \$19.95 (upgrade)

Apple has released iDVD2, the upgrade to its app for creating DVD interfaces. Version 2 offers new interface themes (including motion backgrounds), and lets users simultaneously encode and build DVDs in Mac OS X version 10.1. iDVD 2 is available now.

### E320 Laser Printer

Lexmark, [www.lexmark.com](http://www.lexmark.com), \$359

Lexmark says this monochrome laser printer offers 16-ppm speeds and a 1,200-dpi resolution. It connects via USB and comes with 4MB of memory, with options to upgrade. The E320 is available now.



Its low price makes this laser printer attractive.



# INtheSTUDIO with the Pittsburgh Penguins

## NHL Hockey Team Uses Macs to Connect with Fans

**B**oom! That's what you'll hear during the minute-long video of Pittsburgh Penguins defender Darius Kasparaitis smashing into unfortunate NHL hockey players. Fans can keep close tabs on their team thanks to a hidden colony of Penguins, who produce the team's local TV spots, Web-site video, and big-screen entertainment at Pittsburgh's Mellon Arena. And surprise, surprise, they use Macs to do it. We talked to the Penguins' game-entertainment and Web-site crew to find out how.—NR

### Who They Are

The team of nine people uses six TiBooks, one iBook, and four Power Mac G4s (including a Dual 800) to produce about 80 percent of the Penguin's media campaigns and Web-site content. They shoot video on professional Sony DV Cams (PD150, PD100, and DSR500WS models) and edit it with Apple's Final Cut Pro. This do-it-yourself approach has some big benefits. The in-house Penguin staff can produce a local TV spot for about half the price it would cost to hire an ad agency, so the Penguins can increase the amount of coverage available to their fans. This can take the form of extra video from the NHL draft, TV profiles of the team members, or Web video of player interviews and game highlights. "We're not trying to win any awards," says Paul Barto, director of game presentation for the Penguins. "We're just trying to get a message out there."

### All Penguins. All the Time.

The Penguins' official Web site ([www.pittsburghpenguins.com](http://www.pittsburghpenguins.com)) is a very popular destination. Hit with 200,000 page views per day, the site is jam-packed with video the fans just can't find on the major networks: locker-room interviews, footage of morning practice, and press conferences. "The news stations come in and put together a 45-second blurb," says Nathan Wadding, manager of game entertainment. "We try to cover the press conference in its entirety." During the NHL drafts last year, the Penguins posted near-instantaneous results on location in Sunrise, Florida.

Even the players shoot video. When the Penguins went to Tokyo to kick off the 2000 hockey season, defender Ian Moran took a Sony PD100 camera and uploaded his footage to the Penguins' Web site from halfway around the world.



PHOTOGRAPHY COURTESY OF THE PITTSBURGH PENGUINS

Macs bring video like this to the Penguins' Web site.

### The Jumbotron

What the heck is a Jumbotron? It's a giant arena scoreboard that entertains fans with music, video, and spinning mascots during the game. At home games in Pittsburgh, the Penguins light up the Jumbotron with digital video edited in Final Cut Pro, tweaked in After Effects, outputted to Sony's DVCam format, and played back through the DVCam DSR1800, Sony's professional deck.

When Penguins fans are watching their team, how the scoreboard video got there is probably the last thing on their minds. But the rabid fans can never see too much hockey action and the game-entertainment crew is glad to oblige.

## Penguins Left Wing and Mac Guy

**P**enguins left wing Krzysztof Oliwa bought a Titanium PowerBook G4 two days after it hit the stores, and now he uses it for everything from feeding his digital-photography hobby to running his sports-apparel company, KO Gear ([www.kogear.com](http://www.kogear.com)).

"I can use my Titanium to control my entire site and server from the road," says Oliwa, who's away from home during about half of the hockey season. He uses Adobe Photoshop, Adobe GoLive, and Apple iMovie, among other apps.

When he's not wreaking havoc on the ice, Oliwa's managing his KO Gear clothing line from a TiBook.



(From left to right) Nathan Wadding, Chris Devivo, Doris Minnis, Paul Barto, Mia Scott, Mike Wurman, and Joe Hale are part of the Penguin's game entertainment and Web-site crew.

## Incredibly Unreal Macworld Expo Predictions

### Apple XP

Bill Gates will become so insanely jealous of Apple's new lineup that he'll hatch an outrageous scheme to bring Windows to the Mac.

### iCan't Believe These Jokes

Apple announces the following new products: iCod, a sonar-powered fish finder; iRod, a modern divining rod that leads you to water; iGod, an eBook reader that comes with the Bible preinstalled; and iWad—um, never mind.





See us at  
Macworld Expo  
San Francisco  
Booth 2111

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important.

Very important.

I only share my  
files with those  
I trust.

I trust DAVE.

Mac to PC, PC to Mac. Cross-platform file and print sharing is too vital to your business to risk. Trust Thursby, the company with 15 years experience. Trust DAVE, the solution with a proven track record. Share files and printers across a network with no barriers. DAVE installs on your Mac with no additional software required for the PC. It's fast, secure and easy to use. Download a free evaluation today!

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and print  
*The File Share Folks™*





# scrapbook

No relation to those three blind rodents...

## The Seeing-Eye Mouse

by Narasu Rebbapragada



**W**ith no roller ball to get dirty and clogged, an optical mouse runs smoother and more accurately, and lasts longer than the mechanical mouse of yesteryear. We talked to Agilent Technologies, which makes the optical sensor technology for almost every mouse out there, and Logitech, a manufacturer of optical mice, to find out exactly how these little devices work.

### The Cord

The cord transmits x-y coordinates, which describe a mouse's movement, via a USB interface to the computer. The computer translates this information and positions the cursor on your screen accordingly.

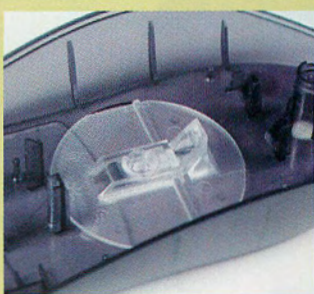
### Or Lack Thereof

A new generation of mice has emerged—the cordless species. Instead of sending the location data through a cord, a cordless mouse sends this data as a radio signal to a USB receiver plugged into your computer. The mouse works up to 6 feet away, and it doesn't need a clear line of sight to the receiver.



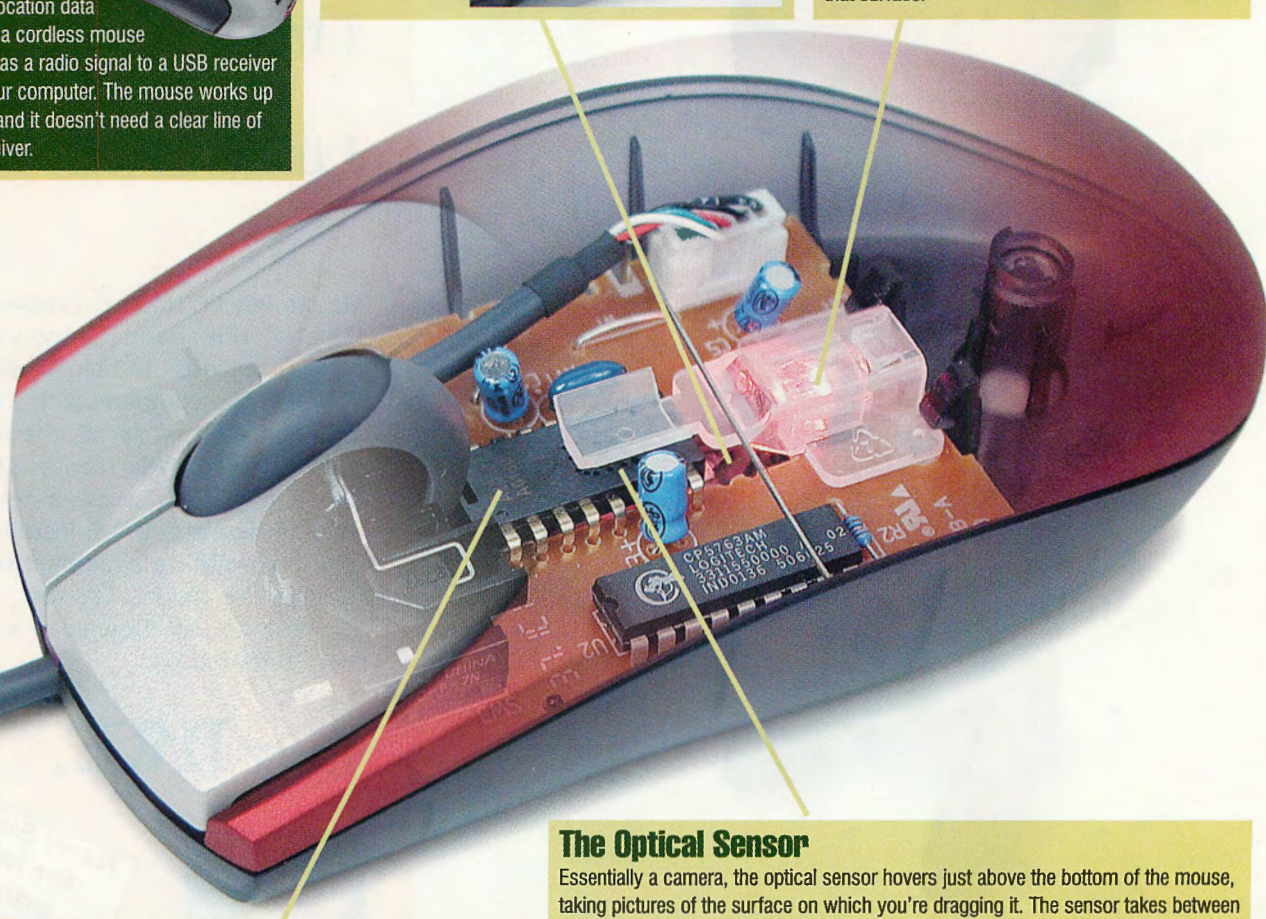
### The Lens

This molded piece of plastic focuses the LED's light (see right) on the optical sensor (see below).



### The LED

The LED (light-emitting diode) illuminates the surface on which you're dragging the mouse, allowing the optical sensor (see below) to take a series of pictures of that surface.



### Digital Signal Processor

Effectively the mouse's brain, the DSP receives a sequence of images that record what the mouse "sees" as it moves around. Operating at 18 million instructions per second, the DSP processes these images, analyzing the similarities between frames to determine how far apart they are on the surface below them. The DSP then turns this information into x-y coordinates that indicate the mouse's movement.

### The Optical Sensor

Essentially a camera, the optical sensor hovers just above the bottom of the mouse, taking pictures of the surface on which you're dragging it. The sensor takes between 1,500 and 2,500 pictures per second at a resolution of 800 dpi. It then sends that series of high-quality images to the DSP (digital signal processor; see left).

### Double the Pleasure

Some mice have two optical sensors, doubling the number of pictures sent to the DSP (see left). The DSP then chooses the best pictures on which to base its mouse location data. The result is more accurate and quicker mouse movement—great for gamers.





# Harry Potter

## AND THE SORCERER'S STONE™



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www.aspyr.com



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**Mac OS 10.1 is here. It's fast. It's stable.  
It's slick. The time to upgrade is now.  
But how can you ease your transition from  
9 to X? We're glad you asked.**



Find  
TinkerTool  
2.0.2 on  
The Disc.

**T**he days of Mac OS 9 are numbered. The age of Mac OS X has begun. The signs are everywhere. Every new Mac has OS X on its hard drive. Microsoft's Office v. X suite—Word, Excel, PowerPoint, and Entourage—runs exclusively on OS 10.1.

Adobe has shipped an OS X version of Illustrator, and InDesign and Photoshop are coming Real Soon Now. Macromedia has released FreeHand 10, and is busily OS X-ifying its other apps. From A to Z, the list goes on: Alias|Wavefront Maya, Bare Bones Software BBEdit 6.5, Corel Graphics Suite 10, Deneba Canvas 8, Extensis Suitcase 10, FileMaker Pro 5.5—we could keep marching through the alphabet, but you get the picture. Everybody's X-ing.

For some users, however, entering this brave new world is more than a little scary. Moving to a completely new operating system can be trying for longtime Mac aficionados who have grown accustomed to the familiarity and consistency of the Classic Mac OS. Also, you may still have doubts, having heard all the griping (including ours) about the fussiness of both the Public Beta and the initial Mac OS X release.

All that has changed with version 10.1. Finally, Mac OS X feels like a real operating system—so much so that we now heartily recommend making the jump to X. However, we also understand that you may want to wait. After all, a number of key applications for graphics, video editing, and music haven't yet made their way to OS X. Also, some hardware drivers may not be available for a while—if ever, in the case of some older peripherals.

Still, for most users, it's time to move to a new and better system—and that's why we created this guide. You can ease the transition from Mac OS 9 to Mac OS X by reading our answers to more than 40 of your most pressing questions about this new operating system and how it works.

It's time to reboot.

# It's Time

by Jeff Pittelkau





# to Switch



# STEP 1: GET FAMILIAR WITH MAC OS X AND LEARN THE SYSTEM BASICS

You'll spy an Apple logo in the upper-left corner of the screen, but not much else gives you a clue that you're still using a Mac. The Special menu is gone. Icons look different. The Trash isn't on the desktop. Confused? Here's some help finding your way around Mac OS X.

## LOOK AND FEEL

**Q: I'M NOT BLIND, SO WHAT'S WITH THOSE HONKIN' HUGE ICONS? CAN I VIEW FILES ANY OTHER WAY?**

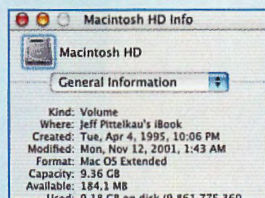
**A:** Mac OS X's Finder gives you three choices for navigating files and folders—by icon, list view, or column view. Switching between views is easy: Just click the view buttons in the top-left corner of the Finder window's toolbar, which is fully customizable and, like the Dock, can hold favorite folders, files, and even Web addresses. And what about those big icons? Make 'em smaller if you want—from the Finder's View menu, select Show View Options and resize your icons to anything from 16 by 16 to 128 by 128 pixels.



You know what they say about the size of someone's icons.

**Q: CAN I CHANGE MY HARD DRIVE ICON?**

**A:** But of course. There is, however, a little twist. Only administrators have permission to change the hard drive icon. (We know, all that pesky Unix permission stuff—



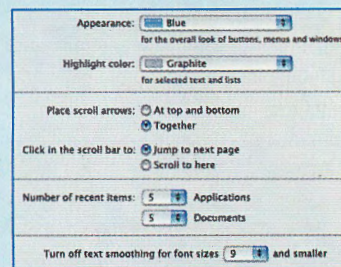
If you're logged in as System Administrator, you can copy and paste hard disk icons via the Info panel.

what a drag.) First, log in as System Administrator (from the Apple menu, select Log Out). Once you've done that, it's the same old song and dance as in OS 9—just use the Info panel to copy and paste icons. Note: If you're just changing icons for files and folders you own, you do not need to log in as System Administrator.

**Q: HOW MUCH CONTROL DO I HAVE OVER MAC OS X'S LOOK AND FEEL? NOT MUCH, RIGHT?**

**A:** Even Steve Jobs's mother won't deny that Mac OS X's look and feel has limited customizability—for now, at least. You can easily control some of the basics, such as using your own picture as a desktop pattern (via the Desktop pane in System Preferences) and changing the highlight color and appearance of scrollbars (via the General settings pane). If you want to do more, you'll need a third-party utility, such as TinkerTool (free, [www.bresink.de/osx/TinkerTool2.html](http://www.bresink.de/osx/TinkerTool2.html)), though even this tool is limited—for instance, you can't change certain system preferences such as the menu bar font.

The General settings pane is one of the few places where you can customize OS X's look. Yeah, we know—big whoop.

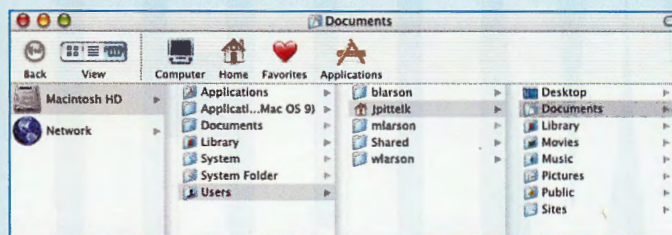


## NAVIGATION

**Q: WHAT HAPPENED TO THE FILES THAT WERE ON MY DESKTOP AND IN MY DOCUMENTS FOLDER IN MAC OS 9?**

**A:** Under its pretty user interface, Mac OS X is running a Unix file system, which strictly protects all files against unauthorized access. When you create a user account, Mac OS X creates a private home directory for you with Desktop and Documents folders other users can't see. When you place an item on the desktop in Mac OS X, you're actually placing it in the local Desktop or Documents folder of your home directory.

If you want to share files with other users, place them in the Shared directory (in the Users folder) or in an individual user's Drop Box: In the Users folder, click the appropriate user name, then go to that user's Public folder. The rest of another user's home directory is as off-limits as your best friend's sister (or brother).



Your home directory hosts your Documents folder.

**Q: WHY CAN'T I PLACE FOLDER TABS ALONG THE BOTTOM OF MY DESKTOP ANYMORE?**

**A:** Apple ditched folder tabs like moldy cheese, but all is not lost. You can keep favorite folders in the Dock just by dragging them (or their aliases) into it. To remove an item from the Dock, just drag it out and—poof—it's gone. It's not the same as folder tabs, but watching the poof is fun.



Keep track of applications, folders, and documents with OS X's Dock.

**Q: WHAT HAPPENED TO SPRING-LOADED FOLDERS?**

**A:** They're gone. But don't despair! Apple has replaced them with a feature that's just as useful: Mac OS X's Finder lets you copy and paste files. Just Control-click any file, group of files, or folder, and select Copy from the pop-up contextual menu. Navigate to the location where you'd like to copy the files, then Control-click again and select Paste Item. Pretty neat, huh?

Spring-loaded folders are gone. Copy-and-paste files are the next best thing—maybe even better.

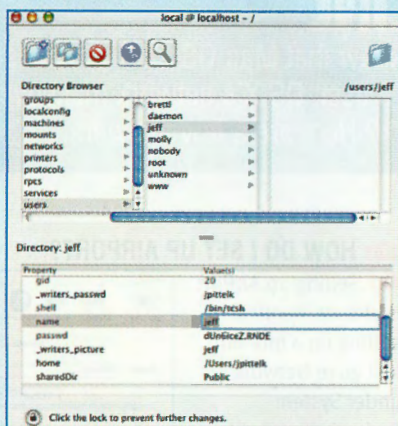




# GENERAL SYSTEM BASICS

**Q: I CAN'T CHANGE MY SHORT USER NAME IN THE USERS SETTINGS PANE. WHAT GIVES?**

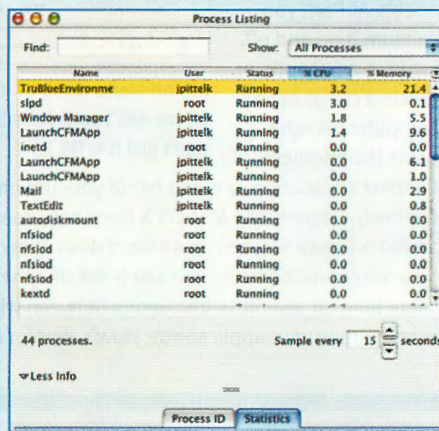
**A:** You need to change it in Mac OS X's NetInfo Manager utility. Take care—this app allows you to view and modify key network and user-account information. Change the wrong setting, and you could make a user account—or your entire system—unusable. The NetInfo Manager also allows you to enable root log-in capability and change the root user's password—you'll find these



The NetInfo Manager is OS X's most powerful and dangerous utility. Use it with caution.

**Q: HOW CAN I TELL WHAT'S RUNNING ON MY OS X SYSTEM?**

**A:** If you just want to see the applications, you can look at your Dock and see which icons have small black triangles next to them, or you can access the Force Quit pane. However, if you want to see all of Mac OS X's current tasks, check out the ProcessViewer utility. From here, you'll see a snapshot of all running tasks—sampled at an interval you specify—with detailed statistics on the amount of virtual memory and CPU power each task consumes, as well as its process ID and owner. If you have the right permissions, you can force-quit a task by double-clicking it.



Save yourself a trip to the Terminal. Use ProcessViewer to see whazzup on your OS X system.

**Q: I HATE THE EMPTY TRASH WARNING. HOW CAN I TURN IT OFF?**

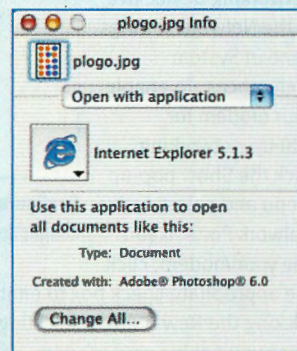
**A:** You'll find this setting inside the Finder Preferences pane. From the Finder menu, select Preferences. Here you can also turn off display of hard disks, removable media, and server volumes; set whether new Finder windows open to your home directory or to the entire computer; determine whether folders open in a new window; and set file-name extensions to appear—or not (hey, some folks like 'em, some don't).



Customize the Finder's behavior in OS X via Finder Preferences.

**Q: HOW DO I OPEN A FILE USING A DIFFERENT APPLICATION THAN THE ONE THAT CREATED IT?**

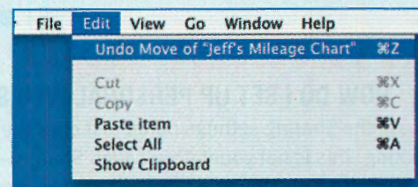
**A:** Just select a file in the Finder, then press Command-I or select Show Info from the File menu. Click the pop-up menu in the Info window and select Open With Application. You can then choose the application to use for opening just that one file or all files of that type. You can also leave the Info pane open and click another item to see information for the selected file, folder, or volume.



Change the application used to open files via Mac OS X's Info panel.

**Q: OK, I'M SOLD—BUT WHAT ELSE IS THERE TO LOVE?**

**A:** How about an Undo function under the Edit menu that finally—after nearly 18 years—works for most Finder actions (with the notable exception of Empty Trash)? Go ahead. Try it. We dare you.



Move a file to the Trash by accident? No problem. Undo works in the Finder in OS X.

## Then and Now: The Mac OS Overhaul

Having trouble getting the hang of Mac OS X? Here's a short list of Mac OS 9's core system components and how they've changed in Mac OS X.

What It Was in OS 9	How It Works in OS X
The Chooser	Choose printers in the Print Center (inside the Utilities folder in Applications) and servers via the Connect To Server function under the Finder's Go menu.
Control Panels	The System Preferences application now houses all the settings for controlling Mac OS X features.
Extensions Manager	Extensions are gone in Mac OS X, except in the Classic environment. Hallelujah!
Application Menu	The icons for running applications appear with a small triangle next to them in the Dock.
Apple Menu	Still there, although not customizable—but why would you want it when you have that cool Dock thing?
Special Menu	Gone. Sleep, Restart, and Shut Down have moved to the Apple menu.
Fonts, Sounds, Preferences, and Startup Items Preferences	These appear in various Library folders. Most preferences you care about—including those for Mac OS X applications—live in the Preferences folder inside your home directory's Library folder.
Documents and Desktop Files	Each user now has private Documents and Desktop folders inside his or her home directory.
System Folder Access	Off-limits unless you log in as the root user. Change anything in your System Folder, and you run a good chance of turning your Mac into a decorative conversation piece.



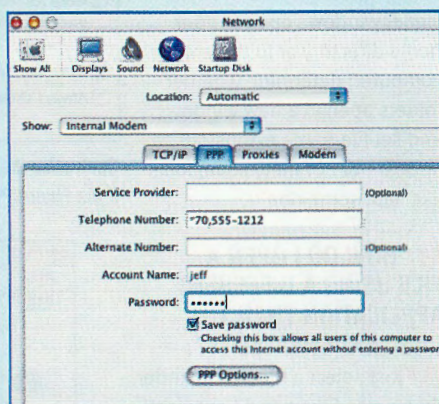
# STEP 2: NETWORK YOUR MAC AND GET ONLINE

With its simple setup and management tools, you wouldn't know that Mac OS 10.1 provides workstation-class networking under the hood. But if you're a die-hard Mac OS 9 user, OS X's network makeover probably has you stumped. Where is everything? How do you set up a network? Here are a few answers.

## GETTING ONLINE

### Q: HOW DO I SET UP MY MODEM TO ACCESS THE INTERNET?

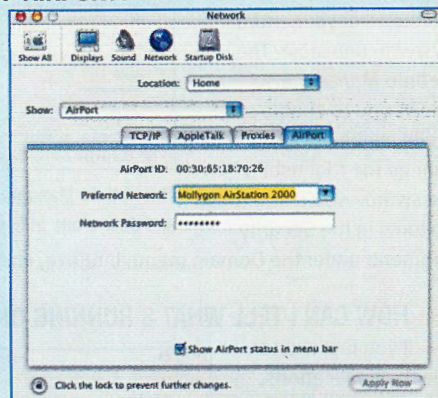
**A:** All of the settings for a modem or any other type of networking device live in the Network settings pane in System Preferences. To enable your modem for dial-up networking, click the Show pop-up menu and select Active Network Ports. If you see your modem, click the appropriate check box to enable it. (If you don't see it, add it by clicking the New button, selecting the modem, and giving it a name.) Once you enable your modem, select it from the enabled ports listed in the Show pop-up menu, then enter your PPP settings. (Mac OS X also supports PPP-over-Ethernet connections for DSL and cable-modem users.) You don't even need to restart Mac OS X to begin using your modem, so you can hop onto [www.macaddict.com](http://www.macaddict.com) in no time (that is your home page, isn't it?).



Configure your modem and other Internet connections via the Network settings pane.

### Q: HOW DO I SET UP AIRPORT?

**A:** Setting up AirPort is almost identical to setting up a modem. Just go to Network under System Preferences, enable the port, and set relevant settings, such as your preferred AirPort network and password. Once you enable AirPort, you can turn it on and off, log in to a network, or create a computer-to-computer network using the Internet



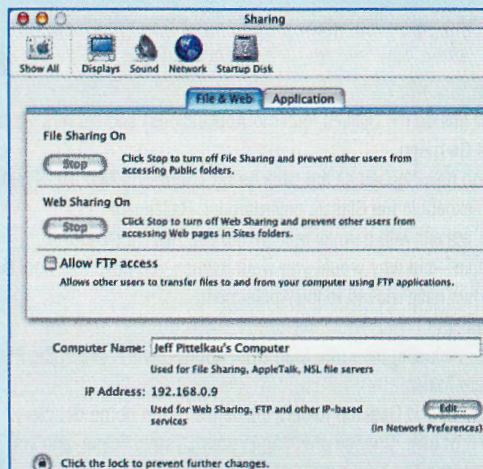
AirPort works much as it does in Mac OS 9, as long as you don't need Base Station capability—you won't find it in OS X.

Connect application or menu bar (if you turn on that feature in Internet Connect). Regrettably, Mac OS X does not allow you to use your Mac as an AirPort Base Station. However, it does allow multiple, simultaneous network connections, so you can leave on Ethernet and AirPort at the same time for seamless transitions between wired and wireless without even quitting your applications. How's that for teamwork?

## INTERNET AND EMAIL

### Q: HOW DO I SET UP PERSONAL WEB SHARING?

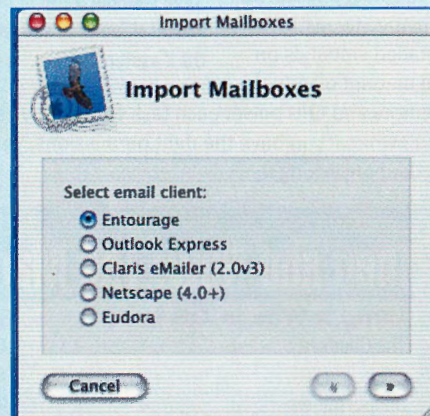
**A:** In the Sharing settings pane, just click the Start button next to Web Sharing. This is not your father's Web Sharing—OS X is actually running the Apache Web server, which serves pages from the Web Server folder in the Library folder, as well as from each user's Sites folder in his or her home directory. Mac OS X's inclusion of Apache will make serious Web-site builders happy, since—unlike Mac OS 9 Web-server applications—it can run CGI scripts without requiring modification or additional software, such as MacPerl.



It may look like personal Web Sharing, but it's really the Apache Web server—and that's a good thing.

### Q: HOLY EMAIL PROGRAMS! I HAVE SO MANY THEY'RE COMING OUT OF MY EARS! HOW CAN I GET DOWN TO ONE?

**A:** OK. We admit that's a loaded question, and some of you probably know the answer: Use Apple's Mail app, which can import mailboxes from Microsoft Entourage and Outlook Express, Claris eMailer, Qualcomm Eudora, and Netscape Communicator. The Mail application built into Mac OS X includes one of our favorite features from NeXTStep's email client—built-in PDF rendering, which is oh-so-cool. Another worthy alternative is Microsoft's Entourage for OS X, which—thanks to a handy little AppleScript provided on the Office CD—can import saved mail from Apple's Mail app.



Apple's Mail application lets you import saved mail from other programs.



# GENERAL NETWORKING

## Q: HOW DO I SET UP AND MANAGE MULTIPLE USERS ON MY MAC?

**A:** From the Users settings pane, you can add and remove users, assign each user a picture that displays on the log-in screen, and control which users have administrator-level access. Once you've added another user to your Mac, you should disable automatic log-in under the Login Window tab in the Login settings pane.



Add multiple users and use this opportunity to display embarrassing photos of loved ones.

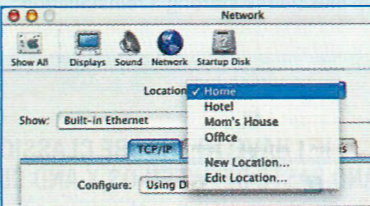
## Q: WHERE'S THE CHOOSER? HOW DO I MOUNT SERVER VOLUMES?

**A:** You can thank your lucky stars that Apple's biggest usability nightmare—the Chooser—is finally gone. To mount server volumes, select Connect To Server under the Go menu in the Finder. That's it. (You can also access servers by pressing Command-K in the Finder). If you've enabled AppleTalk, Mac OS X automatically detects AppleShare servers. To connect to an AppleShare server on an IP network, just type `afp://` and the IP number or host name for that server.

## Q: I TRAVEL A LOT, AND I FORMERLY USED OS 9'S LOCATION MANAGER ALL THE TIME. WHERE IS IT IN OS X?

**A:** It's gone, but don't have a conniption fit just yet. You can set up locations for networking in the Network settings pane—or you can simply let OS X choose an appropriate network setting based upon what connections it detects. You can also prioritize Mac OS X's use of multiple, simultaneous network connections enabled for each location. If you're a PowerBook user who relies on a modem occasionally, you'll want to enable the modem only when needed so OS X won't use it otherwise. And if you travel to multiple time zones, you'll need to select those manually in the Date & Time settings pane.

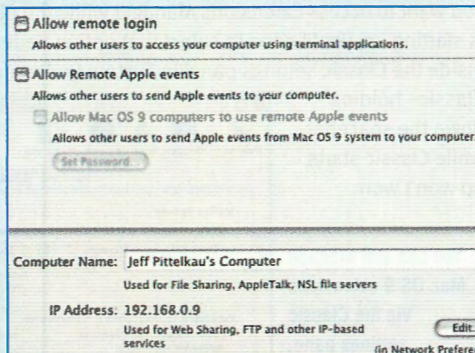
The Network settings pane lets you configure multiple locations.



## Q: I HEAR THAT UNIX MAKES MAC OS X MORE VULNERABLE TO HACKERS. HOW CAN I PROTECT MYSELF?

**A:** Hackers have found several ways to gain access to the Mac OS X system, especially if your Mac has a fixed IP address. Fortunately, you can stop the madness via Sharing under System Preferences. Remote log-in and FTP access are the two most dangerous options, and you should turn off both unless your Mac has a firewall. If people know your password, they can use either of these access methods to get onto your Mac and erase files or plant malicious code for attacking other computers. Yes, there are people like that out there.

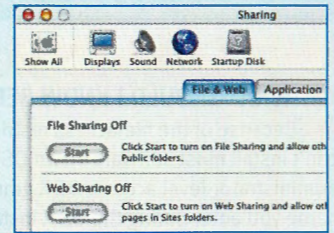
Use the Sharing window to give as much access to your Mac as you feel comfortable with.



## Q: HOW DO I SET UP FILE SHARING?

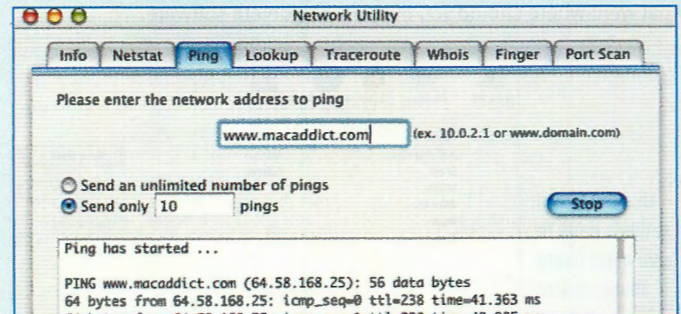
**A:** If you've used File Sharing in Mac OS 9, the Sharing settings pane under System Preferences will look familiar. Simply click Start to enable File Sharing. This allows you to share your entire disk and the home directory for any user accounts you set up. When nonadministrators log in, they will see only their own home directory and the Public folders in other users' home directories. However, if you have administrator-level access, you have the option of mounting your Mac's entire hard disk. Use discretion in making other users administrators—you don't want the kiddies offering up your private communiqués for public consumption, do you?

Click Start to turn on File Sharing.



## Q: DO I NEED TO USE UNIX COMMANDS IN THE TERMINAL APPLICATION TO TEST MY NETWORK?

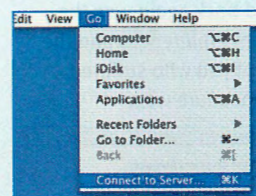
**A:** No—this is a Mac, after all. The Network Utility application included with Mac OS X lets you check the status of each of your Ethernet ports, ping other network nodes, and perform queries such as whois and finger. For you Internet newbies, the latter two allow you to find out ownership information for Web sites and email addresses, respectively.



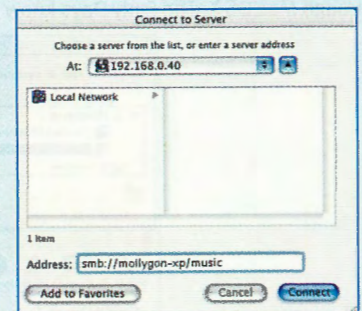
You don't need a Unix command line to perform basic Internet diagnostics—use Apple's Network Utility.

## Q: I'D LIKE TO LEARN TO SAMBA. CAN YOU TEACH ME?

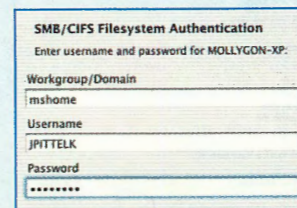
**A:** We'll presume you want to connect your Mac to enterprise servers via Mac OS X, not learn the Brazilian dance. The Samba client is useful for connecting to machines running other (lesser) operating systems: that is, Windows or Linux. Here's how to connect:



**Step 1.** Open the Connect To Server window, accessible under the Go menu.



**Step 2.** Enter `smb://` followed by the server's address and storage volume name, then click Connect.



**Step 3.** Enter the network domain for the server, change your user name if necessary, type your password, and then click OK. Just like that, you're in.



# STEP 3: GET YOUR APPLICATIONS UP AND RUNNING

By making Mac OS 9 capable of running in an emulated environment in Mac OS X, Apple achieved a technological miracle almost as amazing as Windows not crashing for a day. Apple's clever engineering does come at a price, however. Installing and using software just got more complicated.

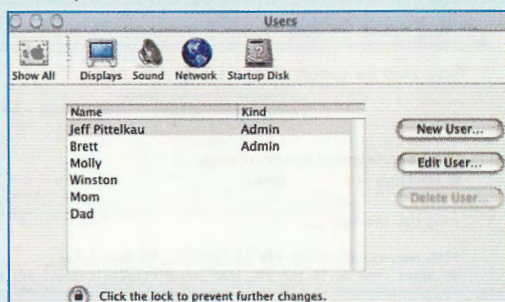
## INSTALLING APPS

### Q: WHAT SHOULD I KNOW BEFORE INSTALLING SOFTWARE?

**A:** Because of the file-access restrictions built into Mac OS X, you can't install most software on an OS X system unless you have administrator-level access. OS X grants this access to the first user name you enter during the OS X installation process. To give this access to other users, go to the Users pane of the System Preferences app.

Note that some Mac OS 9 software installers don't function properly in Classic, so it's a good idea to reboot into Mac OS 9 if you plan to install Mac OS 9 software. Don't try to copy already-installed Mac OS X software from one Mac to another. Not only will you most likely be violating your user license, this also may not work, since some apps need to store other files outside the Applications folder. For this reason, it's a good idea to keep installation documentation handy so you know what went where should you ever want to delete software.

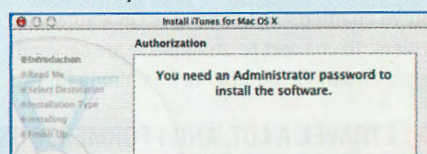
Use the Users settings pane to give other users administrator access.



### Q: HOW DO I DOWNLOAD AND INSTALL SOFTWARE AND SHAREWARE FROM THE WEB?

**A:** This can be a little tricky since there are so many ways to get files for Mac OS X. If your file is compressed—that is, if the file name ends in .sit, .hqx, .tar, .zip, .gzip, or .gz—you'll need to decompress it with a utility such as Stuffit Expander. If the file is a disk image—the file name will end in .dmg or .smi—mount it using Apple's DiskCopy utility. Once mounted, the disk image appears in the Finder, just like any other disk volume. Finally, if the software is a Mac OS X package file (its name will end in .pkg), run Apple's Installer utility to install the software.

The Installer in Mac OS X typically asks for an administrator password before letting you install software.



### Q: HOW DO I REINSTALL AN APPLICATION (LIKE MAIL) THAT CAME WITH MAC OS X?

**A:** There is no easy way to extract bundled applications from the installation CD for Mac OS X. You must reinstall Mac OS X to get any of the apps or utilities that come with it. Fortunately, this process does not trash your applications, users, or documents unless you specifically tell the installer to erase your disk. That said, it's never a *bad* idea to back up files before starting a reinstallation.

## CLASSIC FOIBLES

### Q: WHAT DO I DO IF MY APPLICATIONS WON'T EVEN RUN IN CLASSIC?

**A:** Many Mac OS 9 games and utilities that require direct access to hardware won't run in Classic. If you want to use these applications, reboot into Mac OS 9. To switch from X to 9 and back again, use the Startup Disk settings pane in Mac OS X's System Preferences and the Startup Disk control panel in Mac OS 9. Those of you who suffered through Mac OS X: The Early Days know this procedure well.

Whether you're using Mac OS 9 or X, you can still change your startup disk and system folder.



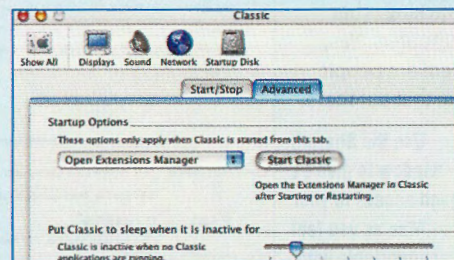
### Q: IF I HAVE TO ENDURE CLASSIC, CAN I AT LEAST COPY AND PASTE BETWEEN OS X AND CLASSIC APPLICATIONS?

**A:** This is one of the modern miracles of the Classic environment. Even though Classic creates a separate virtual machine, you can copy and paste, as well as drag and drop, between the two systems.

### Q: MY CLASSIC APPS ARE ACTING UP. I'M FIGHTING THE URGE TO DESTROY THEM, BUT I STILL NEED THEM. HOW CAN I CLEAN UP CLASSIC?

**A:** You can use the Extensions Manager, just as you would do in Mac OS 9, whenever the Classic environment is up and running. However, if you want to access Extensions Manager while the Classic environment is starting up, you'll need to select that option under the Advanced tab inside the Classic settings panel in System Preferences before starting Classic—holding down the spacebar while Classic starts up won't work.

You can still manage Mac OS 9 extensions via the Classic settings pane.

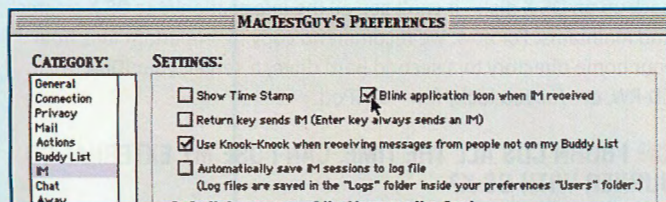




## SOFTWARE BASICS

**Q: AMERICA ONLINE'S INSTANT MESSENGER IS DRIVING ME NUTS! EVERY TIME I GET A MESSAGE, ITS DOCK ICON BOUNCES NONSTOP. WHAT CAN I DO?**

**A:** Instant Messenger isn't subtle when it wants your attention. Fortunately, you can turn off the bouncing icon: From Messenger's Edit menu, select Preferences, and from the Category list on the left, click IM. Uncheck the Blink Application Icon When IM Received box, and your popularity won't seem as annoying. By the way, if you find that bouncing icons in general tend to bring on migraines, you can keep them still when you start up an application. Simply go to Dock Preferences (under the Apple menu) and uncheck the Animate Opening Applications box for a calmer application-launching experience.

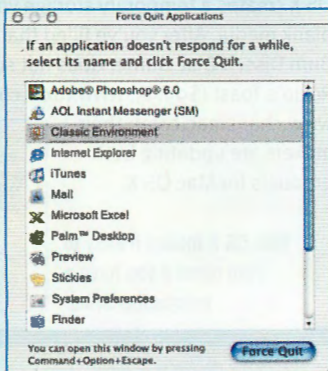


Unchecking the Blink Application Icon box is like giving Instant Messenger a dose of Valium.

**Q: MY APPLICATION JUST FROZE. WHAT SHOULD I DO?**

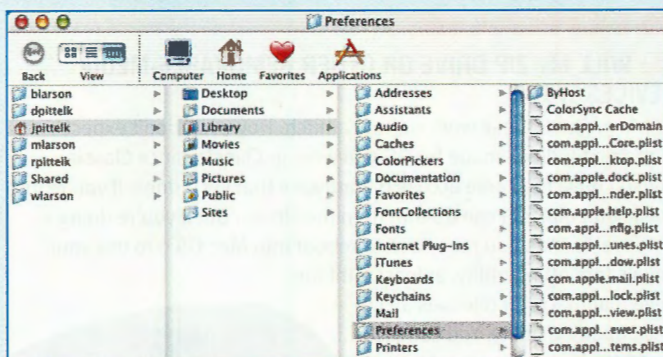
**A:** Do what you always did in OS 9: force-quit. Fortunately, force-quitting actually works under Mac OS X—you can get out of one misbehaving app without disturbing other good apps. Access Mac OS X's Force Quit window from the Apple menu in OS X (but not from the Apple menu in Classic) or by pressing Command-Option-Esc.

Force-quit a single app or the entire Classic environment.



**Q: AN APPLICATION IS ACTING UP AND I WANT TO DELETE ITS PREFERENCES FILE. SO, UM, WHERE IS IT?**

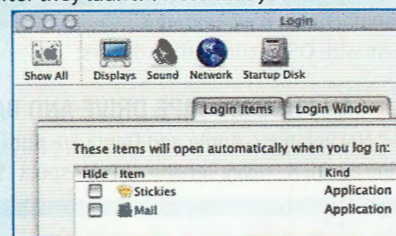
**A:** Most Mac OS X applications store preferences for each user—you'll find yours in the Preferences folder inside your home directory's Library folder. Also, Mac OS X stores preferences in XML format, so if you're really brave, you can look at—and modify!—them using a text editor. Tonight's homework assignment: Use a text editor to position your Dock at the top of the screen. (But if you break your Mac, don't call us.)



This is where your preferences live.

**Q: I LOVED STARTUP ITEMS IN OS 9. IS THERE ANY WAY TO START UP APPLICATIONS AUTOMATICALLY IN OS X?**

**A:** You betcha—via the Login Items tab in System Preferences' Login settings pane. Here you can also specify whether items appear or stay hidden in the background after they launch. Note that you must set Login Items individually for each user account.



To autostart applications when you log in, add them to your Login Items.

## How Applications Work

Classic, Carbon, Cocoa. Try inhaling a hit of helium and saying that ten times fast. OK, don't. But here's what you need to know about the three types of Mac apps and how they work in Mac OS X.

**Cocoa**, Mac OS X's new application-building environment, borrows heavily from NeXT technology. Its object-oriented design lets developers produce new applications quickly. However, it's so different from the Mac development environment of old that developers need to rewrite apps from the ground up for Cocoa. It's no surprise that many of the initial Cocoa applications for Mac OS X are updated NeXT applications, such as Stone Design's Create and The Omni Group's OmniWeb browser. Cocoa applications will not work on Mac OS 9 systems.

**Carbon** is Apple's cleaned-up version of the Mac API (application programming interface), created so that developers can quickly move their existing applications to Mac OS X. Many Carbon applications work just fine on Mac OS 9 systems—Microsoft's new Office applications are a notable exception—but when they're running on Mac OS X, they take advantage of Mac OS X's preemptive multitasking, protected memory, and Aqua interface.

**Classic** applications are unmodified Mac OS apps that cannot take advantage of any of OS X's modern features. All Classic applications share the same memory space, so it's possible for one Classic application to crash the entire Classic environment—just like on Mac OS 9.

Classic Environment (Mac OS 9 applications and extensions)	Carbon app 1	Carbon app 2	Cocoa app 1	Cocoa app 2
	Carbon Environment		Cocoa Environment	

Application Services—Quartz, QuickTime, Open GL, etc.

Core Services—AppleEvents, Core Foundation, Carbon Core, etc.

Core Operating System—Darwin (Mach) Kernel, BSD

Here's an overview of OS X's application architecture. In a nutshell, one bad app shouldn't spoil the whole bunch. Native Mac OS X apps, running under Carbon or Cocoa, run in separate memory spaces, so they can't crash each other. Mac OS 9 apps and extensions, however, share a common memory space and can bring down the entire Classic environment.



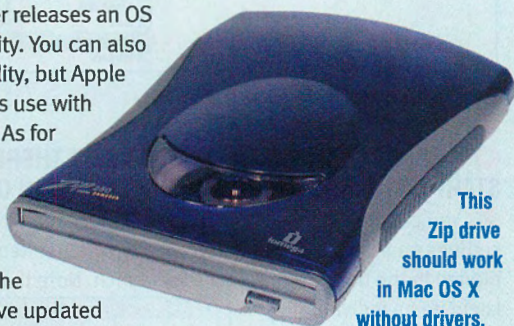
# STEP 4: MAKE YOUR HARDWARE WORK (AKA PLUG AND PRAY)

If there is one area where Mac OS X compatibility is lagging, it's hardware compatibility. Thankfully, we're seeing more and more drivers coming on the scene now that version 10.1 has shipped (just check out Apple's driver download page at [www.apple.com/downloads/macosx/drivers](http://www.apple.com/downloads/macosx/drivers)).

## STORAGE

### Q: WILL MY ZIP DRIVE OR OTHER REMOVABLE-MEDIA DEVICES WORK?

**A:** In general, these work without a hitch. However, don't expect formatting utilities made for OS 9 to work in Classic, since Classic doesn't have the same access to hardware that OS 9 does. If you're just erasing media, you can do that from the Finder. But if you're doing a low-level format, you may need to reboot into Mac OS 9 to use your drive's formatting utility, at least until the drive manufacturer releases an OS X-compatible utility. You can also try OS X's Disk Utility, but Apple doesn't support its use with non-Apple drives. As for non-Apple hard disks and removable media, check to find out whether the manufacturers have updated them with OS X-compatible drivers.



This Zip drive should work in Mac OS X without drivers.

### Q: CAN I USE MY TAPE DRIVE AND BACKUP SOFTWARE?

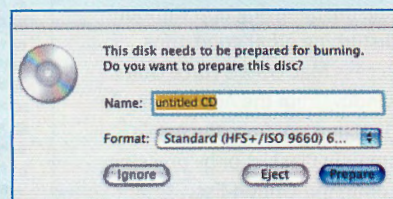
**A:** Not yet, tiger. Apple and Dantz are putting their brains together to bring an OS X-savvy version of Retrospect (\$149, [www.dantz.com](http://www.dantz.com)) to

market as quickly as possible, with an ETA sometime in the first quarter of 2002. Don't use the current version of Retrospect in Mac OS 9 to back up an OS X disk—it can't see all the information Mac OS X creates and maintains. For now, we recommend copying important files from your home directory to a second hard drive, a server, your iDisk, a CD-RW, or—for you lucky few—an iPod.

### Q: I BURN CDS ALL THE TIME. CAN I USE MY EXTERNAL CD BURNER WITH OS X?

**A:** Mac OS X supports many newer CD-RW drives with its built-in disc burner (find a list of compatible drives on Apple's Web site at [www.apple.com/itunes/notes.html](http://www.apple.com/itunes/notes.html)). If Mac OS X supports your drive, just insert a blank disc into the burner; Disc Burner pops up, and Mac OS X creates a temporary storage volume that's the same size as your blank media. After you've filled that volume with the desired files, click Burn Disc. If Disc Burner does not support your drive, you can still use Roxio's Toast (\$99.95, [www.roxio.com](http://www.roxio.com)) or CharisMac's Discrite (\$74.96, [www.charismac.com](http://www.charismac.com)); their makers are updating both products for Mac OS X.

Mac OS X makes it easy to burn discs if you have a compatible drive.

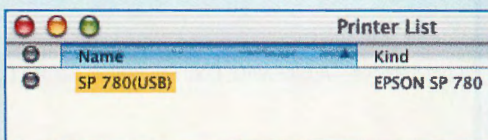


## BASIC HARDWARE

### Q: WILL MY PRINTER WORK IN MAC OS X?

**A:** That depends on what kind of printer you have. If you have a PostScript laser printer with an Ethernet connection, you should have no problems selecting that printer using the Print Center utility in Applications' Utilities folder. Mac OS X also includes a limited selection of drivers for color inkjet printers from Epson, Hewlett-Packard, and Canon (in your Printers folder inside the Library folder). For some models, however, you'll need to download drivers as they become available. In the meantime, if you only have OS 9 drivers installed, you can still print from applications running in the Classic environment. We know, it's a pain, but it works.

Select from connected printers that have drivers via Mac OS X's Print Center utility.



### Q: WHERE DO I PUT THE PPD FILES FOR MY PRINTER?

**A:** If you've already installed PPD files in Mac OS 9, Mac OS X will find them—as long as they're in the OS 9 System Folder selected for use with Classic in the Classic settings pane. To use your printer's PPDs exclusively with OS X, put them in the appropriate language folder—that's right, OS X stores unique PPD files for each language—in Library/Printers/PPDs/Contents/Resources (or System/Library/Printers

/PPDs/Contents/Resources, if you've logged in as the root user). In the English-language version, you're looking for the en.lproj folder.

### Q: CAN I USE MY SCANNER WITH OS X?

**A:** The scanner story is a sad one. Not much in the way of scanner software exists just yet, though Agfa offers beta OS X versions of its ScanWise and FotoLook software for most of its scanners. Check with your scanner's manufacturer to see if and when the company plans to support your model. Until then, you may be able to use the scanner's plug-in software with OS 9 apps running in Classic. Failing that, you know the deal: Reboot into OS 9.

### Q: WHY IS MY TWO-BUTTON SCROLL MOUSE SO JUMPY WHEN I WORK IN MAC OS X?

**A:** That, my dear, is what we call an unsupported mouse. Without an OS X driver for your mouse, you generally can't control tracking or program the buttons. Most USB input devices will work in Mac OS X, but with many higher-end ones, it'll be like trying to navigate a fishing boat in a typhoon.



Expect IntelliMouse drivers this spring. Boo...



# DIGITAL HUB DEVICES

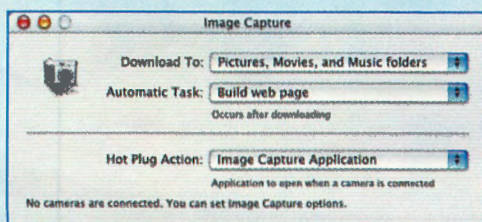
**Q: WILL MY DIGITAL CAMERA WORK WITH OS X?**

**A:** If Mac OS X supports your camera (it supports many from companies including Canon, Nikon, and Olympus), Apple's Image Capture application launches as soon as you connect the camera to your Mac. To use another application or the Finder for transferring images, turn off the autolaunch feature in Image Capture. If your camera is not yet compatible with OS X, try using your camera's download application in the Classic environment. If that doesn't work, reboot into OS 9 to use your camera's software—better yet, slip the camera's removable memory card into a USB card reader.



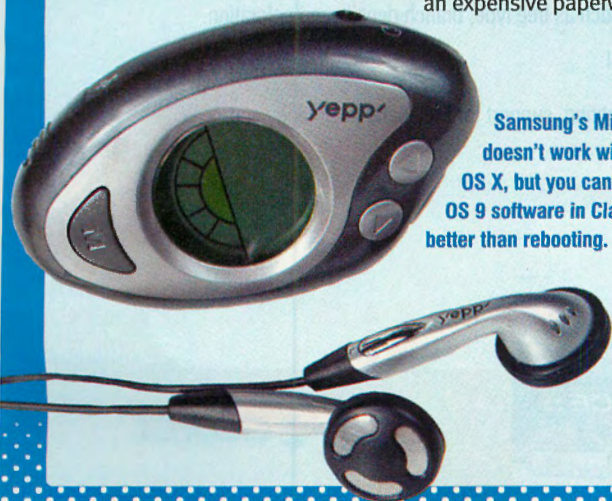
Of the growing number of hardware types Mac OS X recognizes, digital cameras are among the best supported.

Mac OS X's Image Capture application makes downloading images from your digital camera fast and easy.



**Q: MY MP3 PLAYER ISN'T COMPATIBLE WITH iTunes. DOES THAT MEAN I CAN'T USE IT WITH OS X?**

**A:** iTunes supports MP3 players from Sonicblue, Creative, Nakamichi, and—surprise, surprise—Apple. Whether an MP3 player that's not from one of those companies will work depends on how charitable Mac OS X is feeling that day (just kidding—sort of). If Mac OS X recognizes the storage in your MP3 player, you'll see its storage volume in the Finder. If your player's storage doesn't mount on the OS X desktop, try using the player's download utility in the Classic environment. If that doesn't work, you'll have to reboot into Mac OS 9. Also, keep in mind that many MP3 players store files on PC-formatted media, so you should erase storage media from the player, not the Finder. Reformat the media as a Mac volume and the player won't be able to read it, thus rendering it an expensive paperweight.



Samsung's Mini Yepp doesn't work with iTunes or OS X, but you can use its Mac OS 9 software in Classic. It's better than rebooting.

**Q: CAN I USE MY DV CAMCORDER TO EDIT MOVIES IN OS X?**

**A:** If you're using iMovie, the answer is a resounding yes. Practically all FireWire camcorders work with iMovie 2 in Mac OS X. Also, because FireWire is a standard, you don't need a specific driver for your camcorder—just plug the thing in and it'll work. If you need more video-editing muscle, Apple's Final Cut Pro 3 works in both OS 10.1.1 and 9.2.2, and Adobe Premiere for X is coming, but the word's not out as to when. (The Mac OS 9 versions won't work in the Classic environment).



DV cameras work like a charm in Mac OS X.

**Q: DATES, APPOINTMENTS, AND ADDRESSES ARE VERY IMPORTANT TO ME. CAN I USE MY PALM SOFTWARE'S HOTSYNC FEATURE TO KEEP THEM UP TO DATE IN OS X?**

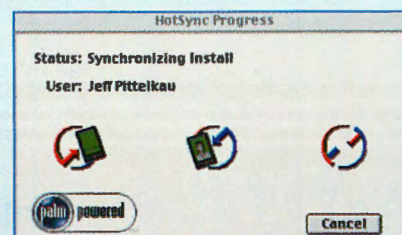
**A:** Palm is working on a Carbonized version of Palm Desktop and the Conduit Manager but had not announced a release date as of press time. Until it ships, you'll have to run the current versions of Palm Desktop and the Conduit Manager in the Classic environment. Just keep in mind that the Classic environment must be running in the background before you start a HotSync operation. If you have problems with timeouts, try the following: Disable and reenable HotSync, restart the Classic environment, or reboot your Mac into OS 9.

Unfortunately, if you're an Entourage user, you'll have to wait for Palm to get off its butt. Microsoft says it will have HotSync capability for Entourage as soon as Palm moves the Conduit Manager to 10.1.



Where, oh where, is Palm Desktop for OS X?

Though Palm doesn't officially support this feature, you can HotSync your PDA in Mac OS X's Classic environment.



The former lab director of MacUser and Macworld magazines (we forgive him), Jeff Pittelkau has been using Mac OS X exclusively since he bought his new iBook.





# When did it start for you?



Ever since you discovered a better use for broccoli than eating it, you knew you were hooked. And now you can take your creative passion to a new plane with Bryce® 5.

Full of intuitive tools that let you design impressive landscapes and fantasy worlds, Bryce 5 will change your perception of what a 3D product can do. Take the new Tree Lab. With it, you can create highly realistic trees, specifying features such as tree type, branch density and coloration. You can even generate tree roots for greater detail.

This version also gives you better control over lighting, support for Metaballs technology and network rendering.

Bryce 5—3D software at its peak.



[www.corel.com/bryce5](http://www.corel.com/bryce5)





In these tight-money times, don't spend cash you don't have buying loved ones gifts that will likely end up in a cobwebbed garage. Make your gifts mean something—and do it without spending a pretty penny.

# make CD gift



PHOTOGRAPH BY W. B. JONES

**B**irthdays. Valentine's Day. Sweethearts' Day. Grandparents' Day.

Unfortunately, we live in a Hallmark-driven society where it has become de rigueur to buy birthday and holiday gifts for just about everyone you know, whether it's your spouse, boss, mail carrier, or Aunt Mary's husband's great-uncle's second cousin. But don't put yourself into financial straits at gift-giving time. Consider a cheap alternative: the homemade gift. And the one we're talking about won't require you to get all Martha Stewart on us. Thanks to the power of your Mac, you can make individualized gift CDs for all occasions and all people, and it will hardly cost you a dime.

You can make any number of great gifts with a CD burner. Create a virtual photo album of your best friends' wedding as an anniversary gift. Compile your sister's favorite songs from her collection of music and burn them to an audio CD for her birthday. Turn the latest family-reunion video into a Video CD for Mother's Day. All you need to get started making your own CDs, complete with custom case covers and inserts, is a CD-RW drive, CD-burning software, a graphics app, a color printer, blank discs, and some inspiration.

by Rick Sanchez



Find  
templates for  
creating a CD  
cover on  
The Disc.



# PART 1: BURNING



Making the actual CD is a cinch. The process just depends on the type of CD you want to create. We used the two most common CD-burning tools—Roxio's Toast (\$80, [www.roxio.com](http://www.roxio.com)) and Apple's own Disc Burner (free, [www.info.apple.com/support/downloads.html](http://www.info.apple.com/support/downloads.html)).

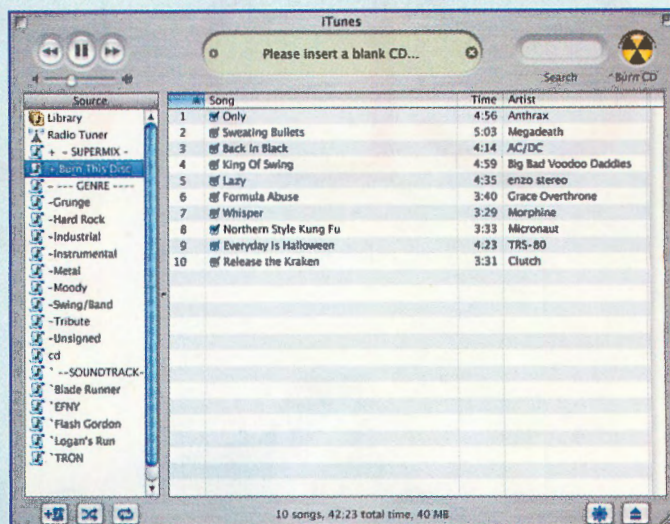
## THE OLD-FASHIONED AUDIO CD

An audio CD, or CD-R, is a different kind of disc from an MP3 or data CD. Audio CDs use the Redbook CD format, and measure their content in minutes rather than megabytes. You can play them in any car, home, or portable CD player, as well as in your computer. A standard CD-R holds up to 74 minutes of content. You can gather material for an audio disc from many different sources, including WAV, AIFF, and MP3 files, as well as other audio CDs.

## HOW TO BURN AN AUDIO CD

If you want to make an audio CD in Disc Burner, your options are limited. It doesn't offer disc-to-disc recording or support file formats other than MP3, and you have to assemble your playlist and burn the disc via the iTunes interface ([www.apple.com/itunes/download](http://www.apple.com/itunes/download)). First convert whatever songs you want to record into MP3 format. Add a new playlist in iTunes and drag your tracks into the list, arranging them in play order. Click Burn CD and the Disc Burner icon will appear. Insert a blank disc, click the Disc Burner icon, and your CD will be ready in a few minutes.

Toast offers more flexibility. If your music is already in digital format, click Audio and drag any combination of AIFF, MP3, and QuickTime audio files into the Toast window. Then click Record. If the music you want to add to your mix isn't in a digital format on your hard drive, you can use Toast to extract AIFF files from CDs. Toast also has a Greatest Hits feature that allows you to record from multiple audio CDs directly to a mix CD by swapping your source discs in and out of your computer, jukebox style. This setup requires a very fast CD burner and a separate CD drive. Greatest Hits saves disc space but is more time consuming and error prone.



Once you have your songs in order in iTunes, click Burn CD.

## I WANT MY MP3!

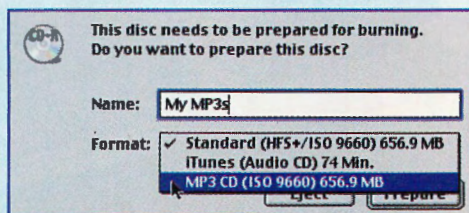
MP3 CDs are perfect gifts for music lovers who want quantity—you can get up to 200 songs on a single disc, compared to the 15 or so you can fit on an audio CD. An MP3 CD is a lot like a data CD, although you must write an MP3 disc in the ISO 9660 format, a standard shared by MP3 devices and CD-ROM drives. Some car stereos, such as the Aiwa MP3-CD, can play both types of discs. Also, a new breed of portable players can read both CD and MP3 discs—this group includes SonicBlue's RioVolt SP250 (see *Reviews* in this issue, p49), TDK's Mojo, and some DVD players like the Samsung M301. And, of course, the disc will also work in any Mac CD drive.

Web sites such as MP3.com ([www.mp3.com](http://www.mp3.com)) and eMusic ([www.emusic.com](http://www.emusic.com)) offer free MP3 files that you can use legally. If you want, you can also convert your own CDs to MP3 files. The easiest way is to use Apple's iTunes to convert the tracks, but Toast also does a pretty good job. (Technically it's not legal to give someone else music you purchased for yourself unless you have express written consent from the record company, which we know you all do.)

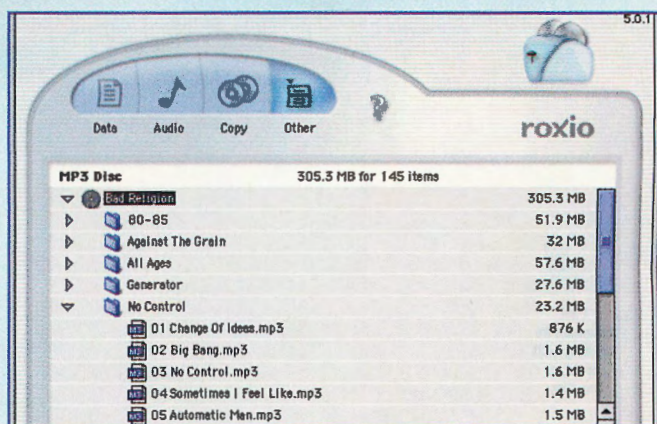
## HOW TO BURN AN MP3 CD

In Disc Burner, insert a blank disc and select MP3 CD from the pop-up menu. This creates an ISO 9660-format disc. Drag your files onto the desktop image, then Control-click the disc and select Burn CD-R. In Toast, click Other and select MP3 Disc from the drop-down menu. Drag the MP3 files into the window, and you're ready to go.

**You can squeeze a lot of music onto an MP3 disc. Just drag all those legal files into the Toast window.**



When you insert a blank CD into your machine with Disc Burner running, it will prompt you for a format.





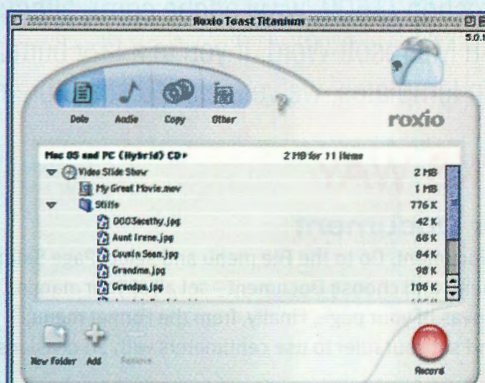
# ING YOUR CD

## THE CATCH-ALL DATA CD

You can burn virtually anything onto a data CD. But that doesn't mean you should stick an Excel document charting little Timmy's growth rate on a CD and call it a gift. The best data CDs involve some type of multimedia, like a QuickTime home movie or a digital slide show. For instance, as a gift for a family reunion, we once took 100 years' worth of family photos, scanned them, touched them up, and turned them into a QuickTime slide show.

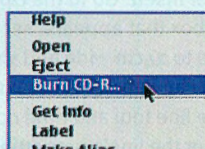
## HOW TO BURN A DATA CD

If you're using Disc Burner, start up the application, insert a blank disc, select Standard from the drop-down menu, and name the CD. This will create a hybrid HFS+ and ISO 9660 disc that can play on most platforms. Then just drag your files to the disc you see mounted on your desktop. When you're done loading all of the files, Control-click the disc and select Burn CD-R from the contextual menu. In Toast, click the Data button, then click New CD. Name your disc and drag your files into the Toast window. Click Record, select the fastest burning speed available in the pop-up dialog, and click Write Disc. Toast handles the rest.



Making a data CD in Toast is easier than counting to three (we hope).

After you've finished setting up your CD in Disc Burner, Control-click the disc image on your desktop and select Burn CD-R.



## THE BUDDING DIRECTOR'S CD

If you want to make a big video splash, nothing impresses the folks like a Video CD. Most Americans aren't familiar with Video CDs, or VCDs, but they're as common as VHS in Asia. VCDs use standard CD-R media to hold about 70 minutes of VHS-quality MPEG-1 video. Unlike a data CD that contains a bunch of individual QuickTime movies, a VCD looks and acts a lot like a DVD disc, allowing you to jump back and forth between full-screen video tracks.

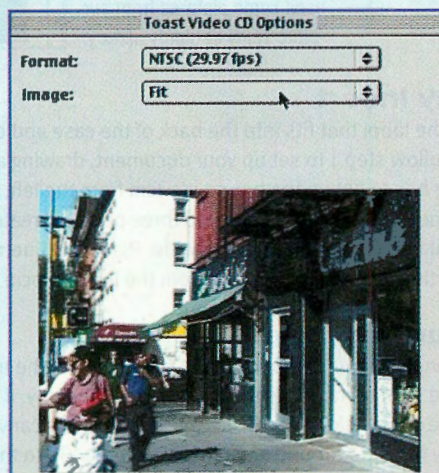
You can play a VCD on just about any computer with a CD player and even on many DVD players. But be careful—not every VCD-compatible DVD player lists VCD playback as a feature (for a list of VCD-compatible players, visit [www.vcdhelper.com/dvdplayers.php](http://www.vcdhelper.com/dvdplayers.php)). VCDs will play on most computers, but you need VCD player software like VCD Player (\$10, [www.johnnylee.com](http://www.johnnylee.com)) or Free VCD (free, [www.cs.ucla.edu/~nathanst/freelvcd](http://www.cs.ucla.edu/~nathanst/freelvcd)).

## HOW TO BURN A VIDEO CD

Disc Burner doesn't support VCD, so you're going to need Toast. If you use existing QuickTime movies, just head to Toast, click Other, and select Video CD from the drop-down menu. Drag your QuickTime files into the Toast window one at a time. This brings up a window with several options, including Frame Rate and a drop-down menu with the choices Fit, Crop, and Fit & Crop. Fit will stretch your movie so it's 720 pixels wide, adding black borders above and below your movie. Crop will fill the 720 by 480 image area, cutting off excess picture. Fit & Crop offers the middle ground, cutting off some of your image so it uses the image area more efficiently. Frame Rate sets your playback for NTSC (United States) or PAL (Europe). (Different countries in Asia use either NTSC or PAL.) Once you've tweaked your settings, Toast will convert your video to a VCD-compatible format.

When Toast is done converting all of your files, click Record.

If you're editing a project in iMovie, VCD creation is even easier, thanks to a Video CD Export plug-in that Toast 5 installs in your iMovie Plugins folder. When you complete your project, choose Export Movie from the File menu. In the dialog, choose QuickTime from the Export drop-down menu, then select Toast Video CD from the Formats drop-down menu. Click Export and save your file. When iMovie finishes preparing the file for VCD, the movie loads in Toast.



Toast converts your QuickTime movies to a VCD-compatible format.

## A BETTER BURN

CD burning used to be a pretty arcane art, but the most recent crop of burners and software has made CD burning much more error proof. Nevertheless, here are some tips:

- If you're buying a burner, get FireWire for faster burn speeds. Drives with BurnProof technology, such as the QPS Que!Fire CD-RW 24X10X40 (\$249 list, [www.qps-inc.com](http://www.qps-inc.com)), produce fewer errors and are worth the additional expense.
- Buy good media. The cheapest media are cheap for a reason. Media from well-known manufacturers like Sony, Verbatim, and TDK tend to be higher quality than those from lesser-known companies, though, as always, there are exceptions.
- You can fit more goodies on 700MB, 80-minute CD-R media than on standard 650MB, 74-minute media, but computer and audio players with mechanisms more than two years old may not be able to read this newer media.
- Don't put labels on your CDs. A label increases the thickness of a CD and may cause problems in CD players, especially slot-loading devices. You can use a Sharpie instead to write on the top of a CD.
- CD-RW discs cost more than CD-Rs, but you can erase CD-RWs and reuse them if you have a CD-RW drive. Plus, some DVD players have an easier time reading VCDs or MP3s burned on CD-RW media rather than on CD-R media.



# PART 2: CREATE

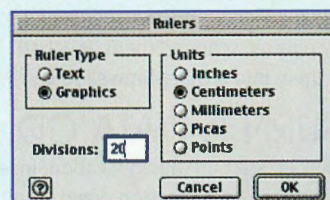


To show that you put some time and care into your CD gift, you should deliver it in pretty packaging. Here, we show you how to make CD covers in both AppleWorks (\$79, [www.apple.com/appleworks](http://www.apple.com/appleworks)) and Adobe Photoshop (\$609, [www.adobe.com](http://www.adobe.com)), although you can use almost any graphics app. Hell, you can even use Microsoft Word. If you're a lazy bum and don't want to go through the rigmarole of making your own templates, we've included some premade templates on The Disc.

## THE APPLEWORKS WAY

### STEP 1 Set Up Your Document

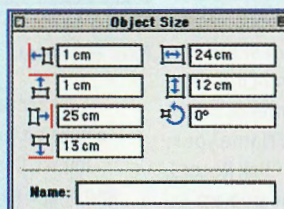
Start a new Draw document. Go to the File menu and select Page Setup, then Landscape. Go to the Format menu and choose Document—set all of your margins to 0 (zero) so you can see the entire canvas of your page. Finally, from the Format menu, select Rulers, then Ruler Settings, and set your ruler to use centimeters with 20 divisions.



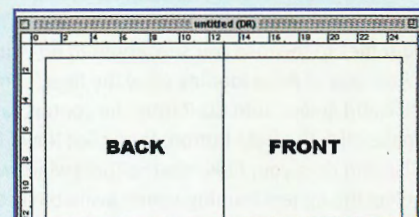
Before you can start designing, you need to set up AppleWorks' ruler measurements.

### STEP 2 Draw a Cover Insert

Select the rectangle tool and draw a box anywhere on the canvas to represent your cover insert. Go to the Options menu and select Object Size in the dialog box that appears, set the left and top margins to 1cm, and the box size to 24cm wide and 12cm tall. You need to divide the box in two so you can later fold it over to make a double-sided cover insert. Select the line tool and hold down the Shift key to draw a straight line. To set the line's properties, go to Object Size again and set the left margin to 13cm, the top to 0cm, the length to 14cm, and the width to 0cm (this does not create an invisible line, but rather sets the width to that of a standard line).



Use AppleWorks' Object Size box to make your templates the right size.



Lay out your template with the inside, or back, cover of the disc on the left, and the front cover on the right.

### STEP 3 Design Your Cover

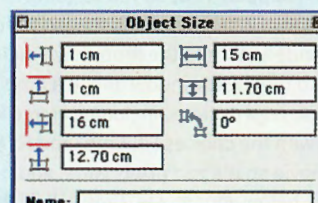
Use clip art, text, or images—your own, or ones you can reproduce legally—to create your cover. When you're done, select the vertical line you made in step two, go to the Arrange menu, and select Move To Back to get it out of the printable area—or just delete it. Now print your cover and cut it out.

For our family reunion CD, we used some pictures from our slide show of family history.



### STEP 4 Draw a Tray Insert

The tray insert is the label that fits into the back of the case and extends to cover the spines of the jewel case. Follow step 1 to set up your document, drawing a box of any size. Then use the Object Size dialog box to set up the box so it's 1cm from the left, 1cm from the top, 15cm wide, and 11.7cm tall. We need to divide this box into three parts to create the spines and the back cover. Draw two vertical lines 14cm tall and 0cm wide. Place one line 1.65cm from the left and 0cm from the top; place the second line 13.35cm from the left and 0cm from the top.



Your tray insert will be thinner and and slightly shorter than your cover.

### STEP 5 Design Your Tray Insert

The leftmost rectangle of your template is the back spine of the tray, the center area is the back cover, and the right rectangle is the front spine of the tray. If you want to use text in the spines, select the text tool, pick a font, click anywhere on the canvas, and type away. Choose a font that is easy to read—around 14 points should do. Go to the Arrange menu and select Rotate, and set a rotation of 90 degrees for the back spine. For the front spine, choose a rotation of -90 degrees. When you're done designing, go to the Arrange menu and choose Move To Back to get both of the spine guidelines out of the printable area. Now it's just a matter of printing, cutting, and placing. Presto—a finished CD jewel case.

Our finished tray insert features an old photograph we scanned.





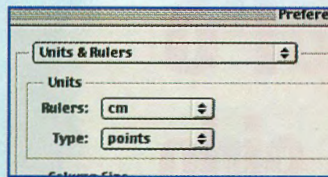
# ING A COVER

## THE PHOTOSHOP WAY

### STEP 1 Set Up Your Document

Set up a new 11-by-8.5-inch document. From the Edit menu, select Preferences, then Units & Rulers. Set your measurement to centimeters.

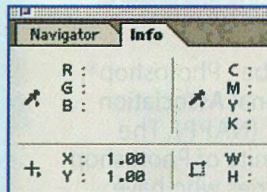
Use the Units And Rulers preference to set your rulers to centimeters. Ignore the Column Size settings.



### STEP 2 Outline a Cover Insert

Create an outline for the cover. Select the marquee tool (the dotted rectangle icon) so you can draw a box—set it to a fixed size of 24cm by 12cm in the contextual palette. Place the marquee tool at the 1,1 coordinate on the X, Y axis using the Info floating palette. Click to create a selection area. Go to the Edit menu and select Stroke—the stroke tool allows you to apply borders to a selection area, which you'll use to create the outline. Set the width to 1 pixel and select Outside under Location.

You need to split the cover area in two so you can differentiate between the front and back cover. Use a guide, which won't show up when you print. Select the move tool and move your cursor to the vertical ruler. Click in the ruler and drag the blue guide to the 13cm line (remember that we created the box 1cm to the right of the 0cm line, making 13cm the halfway mark). Use the Info palette to check your location.



Use the Info floating palette to position your cursor at the 1, 1 coordinates on the X, Y axis.

### STEP 3 Design Your Cover Insert

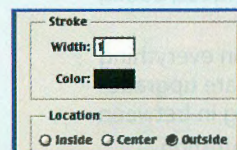
Create a new layer in which to place your art. From the Layer menu, select New, then Layer. Photoshop offers a lot more control over text and has many interesting filters, allowing far more creativity than AppleWorks. Some design ideas to consider include text outlines filled with pictures, composited images, and curved text (for ideas, see "Type Fun," right, or "Get More Mileage from Times," Jun/01, p66). When you're ready to print, turn off the layer with the outline so you don't print a black border around your artwork.



For a film project we transferred to VCD, we used frame grabs to create our cover.

### STEP 4 Outline a Tray Insert

Follow step 1 to create a new document for your tray insert. Set the marquee tool to a fixed size of 15cm by 11.7cm. Place the marquee tool at the 1, 1 coordinate on the X, Y axis and click to make your selection. Again, stroke it with a 1-pixel line outside the selection area. Divide the tray insert into three parts by pulling one vertical guide out of the ruler to 1.65cm and a second to 13.35cm.

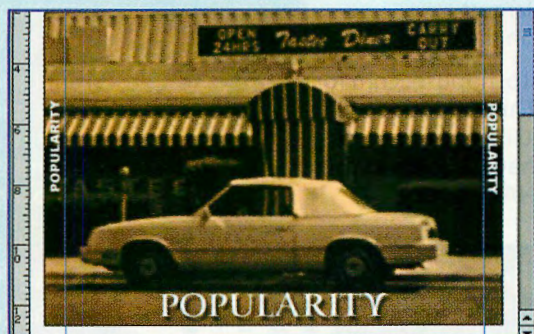


The Stroke dialog allows you to add a border around any selection.

### STEP 5 Design Your Tray Insert

To put text in the spines, type what you want to say. For the back left spine, select the text, head to the Edit menu, and select Transform, then Rotate 90 degrees CCW to rotate it counterclockwise. Choose the Rotate 90 degrees CW option for the front right spine.

Our finished tray insert has a nice, filmlike feel.

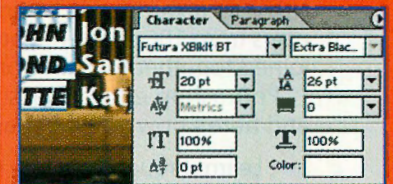


## TYPE FUN

Photoshop 6 makes working with type easier than ever. For our VCD cover, we used several freeware fonts from FontIsland ([www.fontisland.com](http://www.fontisland.com)). Here are some type ideas:

### Adjust the Font

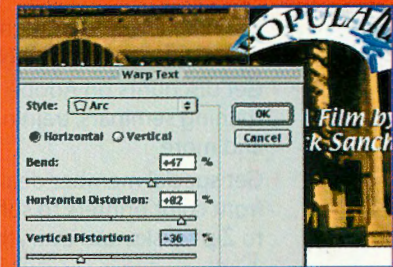
Once you've typed your text, use the Character palette to adjust the kerning, size, and spacing of your characters.



Use the Character palette to adjust your text spacing.

### Warp It

Select the text tool and click the warp text button (a large T in the text tool's contextual menu). You can adjust curvature in the Warp Text dialog. Chances are you will need to go back to the Character palette to adjust the text once you've warped it.



Use warp to give your text that bendy feel.

### Colorize It

You can change the color of your text letter by letter. The easiest way is to use the Swatches floating palette. Highlight the text you want to colorize, then click the color you want in the palette.



Hit the Swatches to give your CD case some color.



# Photoshop® Beginners Read this side

If you're a beginner using Adobe® Photoshop®, you're invited to join the National Association of Photoshop Professionals (NAPP). The NAPP is a worldwide community of Photoshop users from 106 different countries who have joined together to learn from each other.

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- Learn from NAPP's private members-only Web site, loaded with tips, tutorials, downloads, news, video clips, and more
- Get free Photoshop tech support from our Help Desk and product advice from our Advice Desk
- Get help from other members in our online forums and our "NAPP Network"
- Get discounts on Adobe Photoshop training seminars, training videos, books, and more
- Get special member deals on everything from color printers to software upgrades to Zip® disks, and everything in between
- You'll stay in touch with *Photoshop Update*, our monthly e-mail newsletter
- Plus, you can learn from the best in the business at PhotoshopWorld, NAPP's annual convention and the largest Photoshop event anywhere in the world

Visit our Web site at [www.photoshopuser.com](http://www.photoshopuser.com) for a full list of member benefits. Think of it this way, after a year or two in NAPP, you'll be reading the column on the right. **You can have a voice in the Photoshop community. Join NAPP today.**

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Expert users of Adobe® Photoshop® play a special role in the National Association of Photoshop Professionals (NAPP). You can use your expertise and experience to help other Photoshop users who share your same interests, while at the same time, staying on the cutting edge of new Photoshop techniques.

Here's how to get involved:

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- Stay on the cutting edge with advanced topics and industry trends covered in *Photoshop User*, NAPP's member magazine
- Post your artwork in our online member gallery, or compete to win a Photoshop "Guru Award" at NAPP's annual convention
- Be a mentor by joining the NAPP network, where you share your Photoshop and business expertise, one-on-one
- Share your ideas for new Photoshop features with Adobe's development team
- Expert print and Web designers can earn professional certification and recognition through NAPP's new certification program
- Get discounts on Photoshop training seminars, videos, books, and high-end gear such as scanners, digital cameras, plug-ins, stock photography, and everything in between
- Mingle with the hottest Photoshop gurus (such as Deke McClelland, Scott Kelby, Ben Willmore, Julieanne Kost, and Jack Davis among others) at PhotoshopWorld, NAPP's annual convention

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Join today. Call 800-738-8513 (or 727-738-2728)  
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# 3D on the Web

**Realism. Interactivity. The Cool Factor.**  
**3D on the Web is here, and it's time to join the party.**



Find Cult3D 5.2  
Viewer for Internet  
Explorer, Strata  
3Dbase 3.5,  
and demos of  
Amorphium Pro 1.1  
and Shout3D 2.0  
on The Disc.

**A** couple of years ago the Web seemed like the answer to all our prayers. New and exciting businesses were sprouting up left and right, you could find information on just about anything, and people were having all kinds of fun building innovative sites. But then came the crash. And while you probably still use the Web as much as ever, sites have become a little humdrum for our liking. Well, it's time to bring back the magic.

How? By taking things to another dimension—literally. These days, three-dimensional graphics are everywhere: in movies, on TV, and in print. Yet the Web, for reasons that mostly involve bandwidth issues and the lack of satisfactory authoring tools, has remained woefully behind the times, leaving a huge population of cutting-edge designers stuck in a two-dimensional holding pattern. Cheer up: Things are about to get very interesting.

With the recent release of several cool apps, the Web is poised to receive a much-needed makeover (we hope). Here we explore the latest advances in 3D for the Web and highlight several examples of how you can put these technologies to use in the development of next-generation Web experiences. It is, after all, up to you to give the Web the kick in the pants it so desperately needs.



**by Patrick Baggatta**

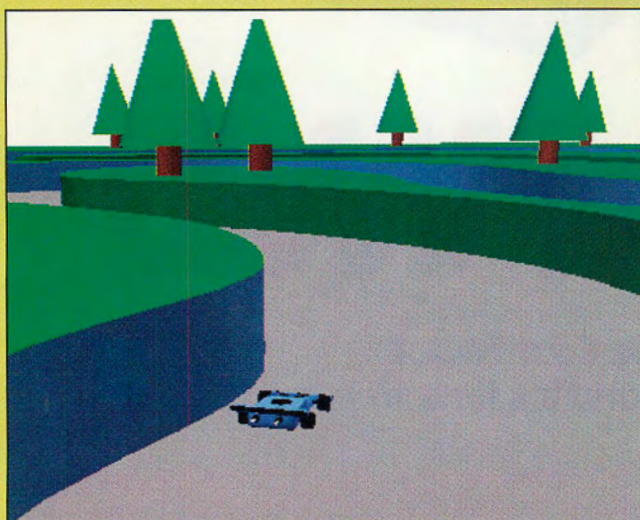


# CHOOSE YOUR 3D POISON

**T**here have been several exciting developments on the Web 3D front during the last year or two. New products include Macromedia's Director 8.5, Intel and Macromedia's Shockwave 3D browser plug-in (which finally lets you view 3D on the Web via Shockwave), and Electric Rain's Swift 3D. The only problem in having all these choices is that you're going to have to *make* some choices. Before you drop hundreds (or in some cases thousands) of your hard-earned dollars on new software, make sure you know what you're doing. First things first: Figure out what kind of 3D projects you want to create. Makes sense, right?

## REAL-TIME 3D

**I**n Web terms, real-time 3D means the browser (with some help from a required plug-in) is actually doing the math necessary to create a 3D scene. In other words, there's a "live" 3D world onscreen with x, y, and z axes. Within this world are 3D models, which you can animate in any number of ways, using limitless boundaries in any direction and author-defined effects such as collision detection, gravity, and camera control. The advantage here is that with a little programming you can hand over the controls of your 3D scene to the person visiting your Web site. Real-time 3D is the direction in which you want to go if you're thinking of games, virtual exploration, or anything else where the user controls the action onscreen. But keep in mind that it requires some programming—you can't avoid it the way you skipped out on your in-laws' Tupperware party last week.



This simple 3D driving game allows your visitors to take complete control over the car as they drive around the 3D world you created.

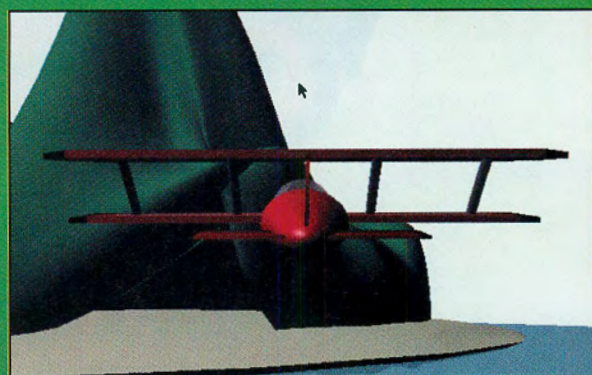
## The Tools of Choice

### Director 8.5 and Shockwave3D

Macromedia, [www.macromedia.com](http://www.macromedia.com), \$1,199

The suite of new 3D features included in Director 8.5 makes real-time 3D on the Web a reality. Using Director in conjunction with the Shockwave 3D player (free from Macromedia), you can help kick off the next generation of Web 3D with Web-efficient applications that take advantage of the streamlined 3D engine built into the Shockwave plug-in.

The one unfortunate (or fortunate, if you're a geek) aspect of using Director is that it requires coding. For those who don't have experience using Director Lingo (the proprietary programming language built into Director), the learning curve is fairly difficult. There's help, however. One book that will teach you the ropes is *Director 8.5 Studio* (Friends of Ed, 2001, \$59.99).



Creating a real-time 3D world with Director 8.5 is not easy, but the results can be well worth the effort.

## ALTERNATIVE 3D WEB SOLUTIONS

**W**hile Director 8.5 and the Flash and Swift3D combo are currently the main tools Web designers use to create interactive 3D, you have several other options. Some are already available, and some are in the works; some are promising, and some are about to join the dinosaurs in heaven.

### Adobe Atmosphere

(not available at press time, [www.adobe.com](http://www.adobe.com))

A PC beta version of Atmosphere is currently available for download, but even though Adobe announced that a Mac beta was also in the works, as of press time we have yet to see it materialize. Still, we're rooting for a Mac version, because unlike Director 8.5, which has a wider range of uses than just creating 3D Web applications, Adobe Atmosphere offers a streamlined environment for creating real-time 3D projects for the Web. Unfortunately, you need the Adobe Atmosphere browser plug-in, which currently enjoys a 0 percent installed base for Mac users, for viewing Atmosphere-created 3D.

**Bottom Line:** Very promising, but where is it?



# 3D-CREATION SOFTWARE

# 3D

**F**or anything more sophisticated than a cube, sphere, or column, you probably need a more complex, stand-alone 3D-authoring tool. Fortunately, there are plenty of choices, ranging in price from free to the cost of a stripped-down Daewoo.



## FOR THOSE WHO EAT RAMEN:

**Strata 3D base** (free, [www.strata.com](http://www.strata.com)) A scaled-down version of Strata Software's Strata 3D Pro.  
**Amorphium Pro** (\$119, [www.amorphium.com](http://www.amorphium.com)) Enables you to create 3D graphics and animations and export them as Web-ready Flash files. This easy-to-use software from Electric Image is a good way to get started in 3D.

## FOR THOSE WHO EAT AT T.G.I. FRIDAY'S WEEKLY:

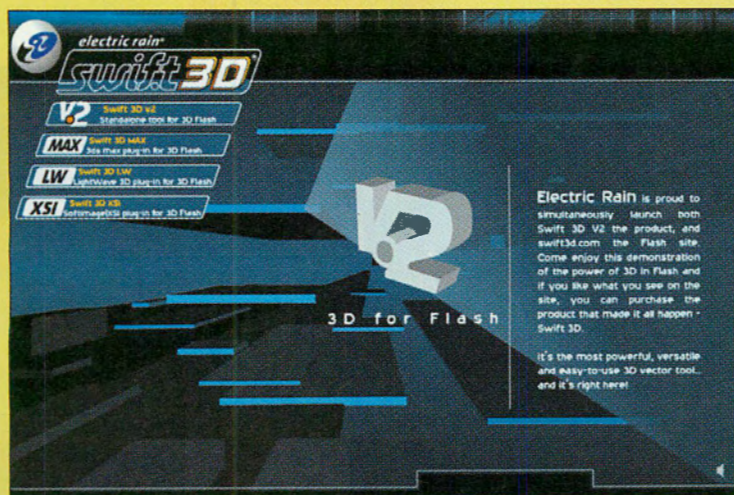
**Amapi 3D** (\$399, [www.amapi3d.com](http://www.amapi3d.com)) This product from Eovia features a free Shockwave exporter to prepare 3D content for use in Director 8.5.  
**Inspire 3D** (\$495, [www.newtek.com/products/inspire/index.html](http://www.newtek.com/products/inspire/index.html)) Scaled-down version of Newtek's LightWave software.

## FOR THOSE WHO DINE NIGHTLY AT THE FOUR SEASONS:

**LightWave 7** (\$2,495, [www.lightwave3d.com](http://www.lightwave3d.com)) The latest version of this Newtek package has a custom-designed Shockwave exporter for opening 3D files in Director 8.5. Mac OS X native.  
**Maya** (\$7,500, [www.aliaswavefront.com](http://www.aliaswavefront.com)) From Alias|Wavefront, it's Hollywood's tool of choice for big-budget 3D productions; has a custom Shockwave 3D exporter. Mac OS X native.

## LINEAR 3D

**T**o create linear 3D animations, designers string together a progression of 3D images that play in a particular sequence. Think spinning 3D logos and you get the picture. Compared to real-time 3D, this route may sound a little boring at first because it offers less interactivity, but as your third-grade teacher always told you, don't judge too hastily. Linear 3D animations can actually be quite spectacular—if you need proof, just spend a few hours watching the promotional graphics and titles on MTV or check out 3D-rendered movies like *Toy Story*, *Shrek*, and *Final Fantasy*. Plus you can add simple interactivity to a linear 3D interface.



The Swift 3D Web site ([www.swift3d.com](http://www.swift3d.com)) is a great example of linear 3D in action and a showcase for many other impressive examples of 3D on the Web.

## The Tools of Choice

### Flash 5 and Swift 3D

**Flash 5:** Macromedia, [www.macromedia.com](http://www.macromedia.com), \$399  
**Swift 3D:** Electric Rain, [www.erain.com](http://www.erain.com), \$159

Although Flash 5 contains no 3D functionality itself, its popularity has prompted the release of several 3D-support programs that enable users to create Flash animations in 3D. The most popular program, and arguably the best, is Electric Rain's Swift 3D, which renders high-quality 3D images you can import into Flash 5. The combination of Flash 5 and Swift 3D is the single most effective way of creating eye-popping linear 3D animations for the Web, plus you don't need any programming know-how.

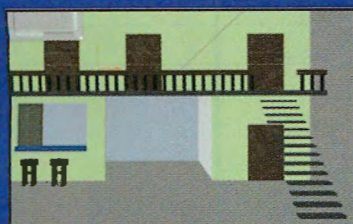


Using Swift 3D is a good way to get simple 3D logos and buttons on your Web site.

## VRML

This is the original 3D standard for the Web—now overtaken in popularity by Shockwave and 3D Flash. VRML is on its way out, but if you're looking for a little history on it, check out [www.vrml.org](http://www.vrml.org).

**Bottom Line:** An old standard—great for its time, but much less versatile than the new standards.



LightWave has the capability of exporting files as VRML.

## Shout3D

(\$195 professional edition, [www.shout3d.com](http://www.shout3d.com))

This 3D exporter does not require a plug-in for viewing, making it instantly accessible to all Web users. The Shout3D authoring environment serves mostly as a converter. Most files you convert to the Shout3D format have to begin as VRML (.wr) files. Many 3D modelers, including LightWave, have built-in VRML exporters.

**Bottom Line:** Nice end results, but not nearly as flexible as Director 8.5 or Swift 3D.

Converting models to the Shout 3D format is an easy process, but you must save models in the VRML format first.





It's time to take your Web site to the next level by adding more interactivity and heightening its visual impact. Here's how to make your site kick some serious 3D butt.

## LOGOS & BUTTONS

**O**K, this is a no-brainer, but it's worth mentioning that *good-looking* 3D logos and buttons are great ways to spruce up the old Web homestead—and now it's easier than ever to make them (see “Spin That Logo,” below).



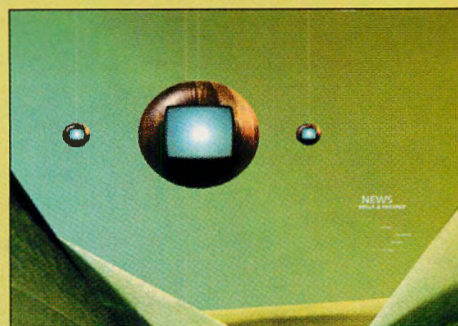
Creating an eye-catching 3D logo is often the easiest first step into the world of Web 3D.



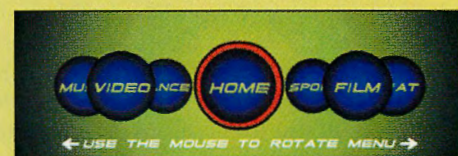
You'll see buttons and ugly blue hyperlinks everywhere on the Web, but 3D buttons are an easy way to make your visitors sit up and take notice.

## NAVIGATION

**G**oing 3D with your navigation gives you a limitless amount of space in which to store, stack, and present your content headers without having to resort to unwieldy lists or the use of multiple HTML pages. The best thing about 3D navigation is that you can create it using either real-time or linear 3D. For instance, with a real-time app, you could create a room with several doors, each representing a different content area of your site. Or you could set up a linear animation that represents a stack of rotating 3D spheres, all containing links to different sections of your site.



Here's an interesting example of 3D navigation on a site in Germany ([www.milla.de](http://www.milla.de)).

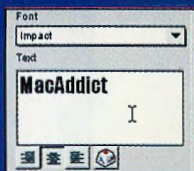


With tools like Swift 3D and Flash 5, designers can present a large number of links without using too much valuable screen space.

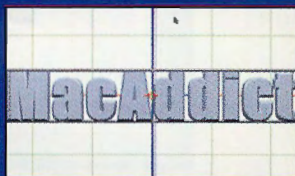
## SPIN THAT LOGO

**O**ne of the easiest ways to create an animated 3D logo for your site is to use Flash 5 with Swift 3D. Here we create a logo from scratch, although you can also convert an existing 2D logo into 3D by importing an Illustrator file into Swift 3D and extruding the image.

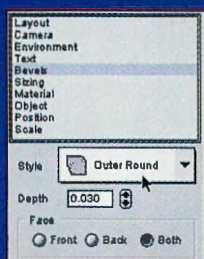
**1** Open Swift 3D (version 2.0). Using the text tool, choose a font for your logo. Then type the name of your company.



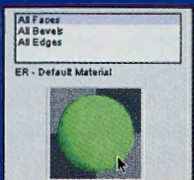
**2** Your 3D logo will instantly appear in the 3D view ports. You may have to click the zoom camera tool (the magnifying glass) to make your logo fit in the view-port window.



**3** Click Bevels (on the left side of the screen) to choose the kind of corners you would like for your logo. We are using Outer Round to give the logo a soft, organic look.



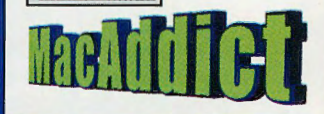
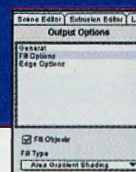
**4** Click Material and select the colors for your logo. You can choose different colors for the bevels, edges, and faces.



**5** Choose a premade animation path from the Spins menu at the bottom of the screen—we used Horizontal Right. To apply the path, drag the animation icon at the bottom of the screen to the view-port window. Then click the Animate button at the top of the screen.



**6** Export your file as a Flash animation (under the File menu). In the Output Options screen you can choose a final shading option. This option allows you to control the way light and shadows affect your Flash images. The shading option also affects the total number of colors used in your Flash file (and hence the file size). We chose an average gradient fill.



**7** Once you've got your Flash (.swf) file, you can import it into Flash 5 and add it to a larger Flash movie for your site. You can also integrate the Flash file with your Web site using some simple HTML coding, similar to the way you would add a JPEG or GIF to your page.



## E-COMMERCE

Imagine being able to pick up an object virtually and spin it to see every angle. Or going to your favorite automobile site to check out a new car, then getting inside to look around (only to realize it doesn't have any cupholders). That's just the beginning of what 3D can do. You can also create an entire 3D shopping environment. For instance, you can model a sporting-goods store in 3D so visitors have to pass the mitt display on their way to the bats. Now you can manipulate the minds of helpless impulse buyers to benefit your bank account. Isn't capitalism great?

## GAMES & EDUCATION

Using Director 8.5, it's possible to make highly interactive, detailed 3D games that look and play like the games consumers are buying for \$40 a pop. You can even create valuable learning tools (see "Solar System Shockwave," below). How about a medical student learning the ropes of surgery through an online 3D simulation instead of on a cadaver? That's a lot more convenient—and less messy.



In this Shout3D sample, users can check out a roomful of products, just like in a real store.



Who says you can't make money off online games? This snowboarding game allows you to feature 3D advertising in the form of billboards and signs throughout the course.

## WEB RESOURCES



Here are a few places you can hit up for help before setting off on your 3D venture.

### TIPS AND TUTORIALS

**Web 3D Consortium** [www.web3d.org](http://www.web3d.org)  
**Flash Kit** [www.flashkit.com](http://www.flashkit.com) (user 3D forum)  
**Were Here** [www.were-here.com](http://www.were-here.com) (user 3D forum)  
**DOUG** [www.director-online.com](http://www.director-online.com)  
**Director University** [www.directoru.com](http://www.directoru.com)  
**3D WORTH SEEING**  
**Swift 3D** [www.swift3d.com](http://www.swift3d.com)  
**Ultrashock** [www.ultrashock.com](http://www.ultrashock.com)  
**Electric Rain** [www.erain.com](http://www.erain.com) (Devlab samples)  
**MTV2** [www.mtv2.co.uk](http://www.mtv2.co.uk)  
**Tera Group** [www.teragroup.net](http://www.teragroup.net)  
**Flash Forward** [www.flashforward2001.com](http://www.flashforward2001.com)  
**Macromedia** [www.macromedia.com/software/director](http://www.macromedia.com/software/director)  
**Director University** [www.directoru.com/welcome.html](http://www.directoru.com/welcome.html) (go to Community Center, 3D Resources)  
**FedEx** [www.3dvillage.com/fedex.html](http://www.3dvillage.com/fedex.html)  
**Gorillaz Game** [www.gorillaz.com/geep/index.html](http://www.gorillaz.com/geep/index.html)  
**Science Year** [www.scienceyear.com/wired/index.html?page=/planet10](http://www.scienceyear.com/wired/index.html?page=/planet10)  
**Sunshine Network** [www.sunshinenetwork.com/fun\\_n\\_games.jsp](http://www.sunshinenetwork.com/fun_n_games.jsp)

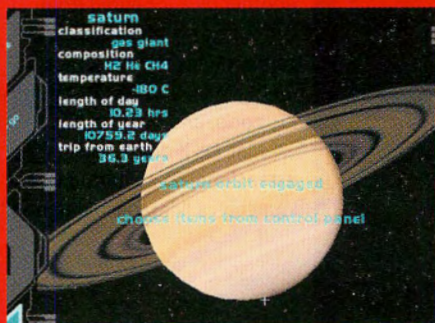
## SOLAR SYSTEM SHOCKWAVE

Recently the BBC commissioned London-based company Okupi ([www.okupi.com](http://www.okupi.com)) to create an interactive model of our solar system to supplement a six-part TV series called *Space*. The result: a 3D virtual tour of the solar system via Shockwave ([www.bbc.co.uk/science/space/solarsystem](http://www.bbc.co.uk/science/space/solarsystem)).

Okupi began by creating the models in 3D Studio Max. OK, OK, we know—that's a PC-only app. Are we traitors? Has *Maximum PC* brainwashed us? No, don't be silly. Sadly, however, the poor folks at Okupi did work on PCs. Still, their project is a good example of what you can do with 3D on the Web—plus, they could have done the entire project on a Mac. In terms of the 3D modeling, Mac apps like LightWave, Amap, and Strata 3D would all work—you would just need a modeler with a custom Shockwave 3D exporter. The Shockwave-exporting capabilities allowed the designers to create the raw Shockwave models, as well as the textures and the planet's orbital paths, all before they even opened Director 8.5.



Okupi created the textures for this model of Earth in Photoshop and applied them during the modeling process.



Director enables users to overlay 2D elements such as text and video on a 3D image like this model of Saturn.



Okupi created the guided-tour feature, which allows users to jump from planet to planet in 3D space, using Director's Lingo coding language.

Patrick Baggett is a multimedia developer who's been obsessed with 3D ever since *The Simpsons* Halloween special when Homer was sucked into the Third Dimension.



# reviews

OK, now it's an avalanche.

## Office v. X

### productivity



**Company:** Microsoft

**Contact:** 800-426-9400 or 425-882-8080,  
www.microsoft.com

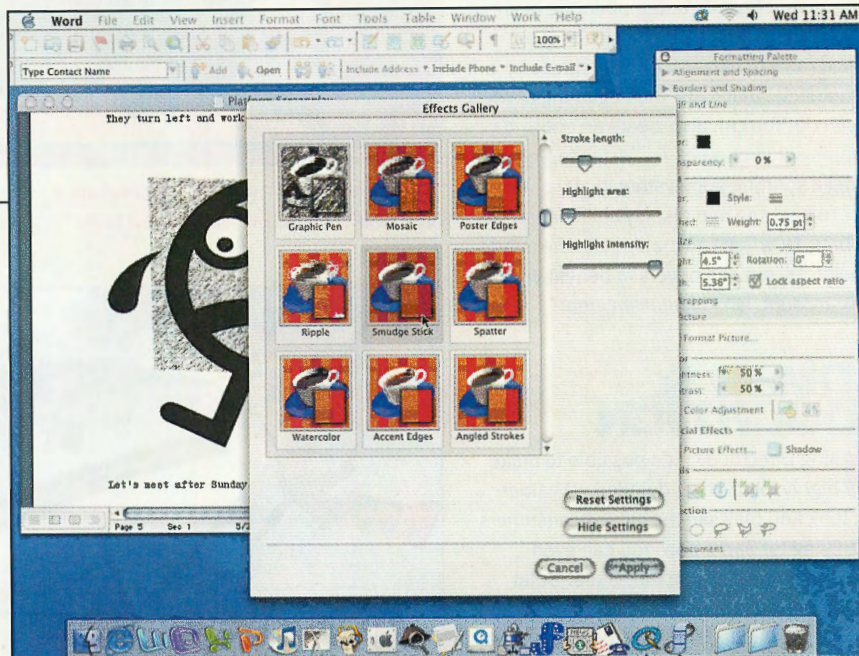
**Price:** \$499 (SRP), \$450 (street);  
upgrade \$299 (SRP), \$270 (street)

**Requirements:** G3 or higher, Mac OS 10.1 or later,  
128MB RAM, CD-ROM drive

**F**ew applications log as much time on our Macs as the Microsoft Office suite: the industry-standard Word, Excel, and PowerPoint for documents, spreadsheets, and presentations, respectively; and Entourage, the popular email client, contact manager, and calendar program. For many of us, the lack of a Mac OS X-native Office was the only barrier to joining the OS X generation. Well, the wait is over and the news is good.

Microsoft Office v. X runs natively under Mac OS X, taking advantage of OS X features such as the Quartz graphics engine and the glitzy Aqua interface. The Office v. X apps are also fast—for all practical purposes, they feel as fast as Office 2001. And they're solid; in all of our testing, none of the apps crashed once, and only minor redraw errors occurred.

The rest of the news is more mixed. If you're looking for a new and substantially improved Office, you'll have to wait—



Office and Aqua, together at last. Finally, we can get some work done in Mac OS X.

Office v. X is very similar to its immediate predecessor, Office 2001. In fact, besides implementing the Aqua interface across the multitudes of dialog boxes, alerts, and toolbars, Office 2001's menu items, preferences, and features remain essentially unchanged.

### The New Office

The first sign that you're leaving OS 9 Country is Office v. X's set of bulbous, neon application icons—cryptic shapes that would look right at home on a *Star Trek: Voyager* uniform. Once you get past the gooey new look, you'll appreciate the painless installation first introduced in Office 2001: Drag the Office X folder from the CD to your drive, and then—well, there is no step two. Another plus inherited from Office 2001 is transparent compatibility back to Office 98 on the Mac, and Windows Office XP, 2000, and 97 on the PC. Mac OS X doesn't use extensions, so at startup Office launches a “database daemon,”

an invisible app responsible for Office-wide integration and for running background tasks such as Notification for Office apps and MSN Messenger (version 2.1 is bundled). In a nice touch, an alarm clock icon pops up in the Dock displaying the number of waiting Notifications.

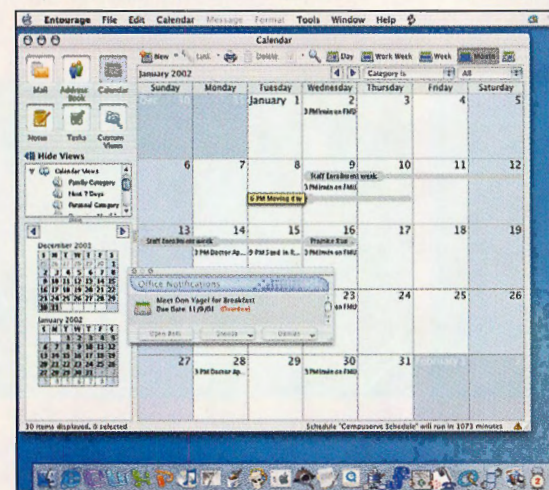
The launch speed of Office apps pleasantly surprised us. Word, for example, snaps open in less than 2 seconds on a Dual Power Mac G4/450, and takes just 6 or 7 seconds on a relatively poky iBook G3/500.

### Microsoft Word

Word X contains only few new features, but we're really jazzed about its new noncontiguous selection capability, which Microsoft calls Multi-Selection. Hold down the Command key, and you can select blocks of text at various places throughout a document. It's a simple concept, but surprisingly powerful: You can apply formatting, perform spelling checks or search and replace, or even get a word count on discrete blocks of text spread throughout a file.

Word X also introduces Clear Formatting, a tool that removes all formatting from a selection with a single command—much easier than removing formatting one element at a time.

In the move to Mac OS X, of course, Word got the Aqua makeover, and it's a terrific



Viewing Calendar Events in selected categories is one of many Custom View options for Entourage's Calendar.



**FREAKIN' AWESOME!**  
The most valuable products, the coolest gizmos.



**SPIFFY**  
A solid offering. Overall a good investment.



**YEAH, WHATEVER**  
Neither recommended nor rejected. Some might like this, but we weren't impressed.



**BLECHI**  
Give us back the time we spent testing this.



Compatible with Mac OS X or later.



Compatible with Mac OS 9.x or earlier.



improvement, making almost every dialog and toolbar clear and sharp. Word makes extensive use of Aqua's Sheets—dialogs that roll out of title bars like window shades, then roll up again when dismissed. Attached to a specific window, Sheets make it clear which document you're addressing, and as a bonus, they're nonmodal, so they don't command the Mac's full attention. Plus, as in all other Office v. X apps, tool palettes zip in and out of the toolbar via OS X's Genie effect.

In addition to getting a shiny look, Office received some minor tweaks—for example, Word's Preferences dialog no longer has those annoying jumping tabs, and now lists the preference groups in a panel along the left. Taking advantage of the Quartz graphics engine, the new Word lets you apply some artistic looks (such as Watercolor and Splatter paint effects) to graphics.

Sadly, none of Word's annoying habits have disappeared. Command-G still doesn't trigger Find Again; customizing menus is still too complicated; AutoCorrect still won't capitalize a sentence that starts with a quotation mark...you get the idea. But Word remains solid, reliable, fast, and indispensable in the workplace.

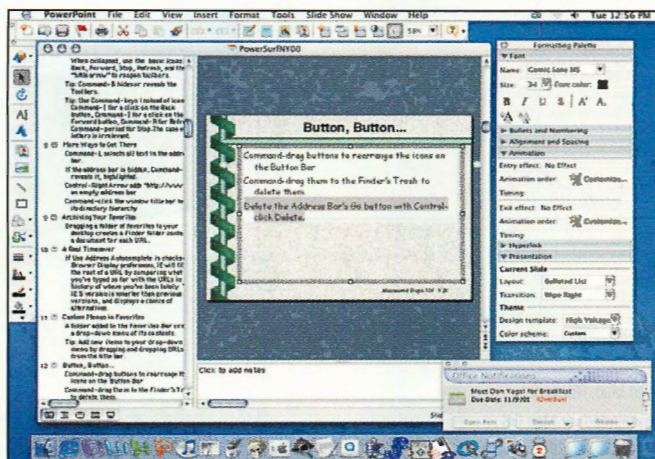
## Entourage

Entourage X is a powerful and feature-rich email client, contact manager, and calendar. New features include multiple undos and the ability to embed rich media (such as QuickTime movies) in email messages, provided that you enable HTML formatting. An Import AppleScript on the Office CD lets you import mail from Apple's built-in Mail app. Less visible improvements include better support for the IMAP4 email standard.

Entourage's main window now displays large Mac OS X-style buttons for the PIM (personal information manager) modules: Calendar, Address Book, Notes, and Tasks. In fact, those functions are now accessible only through buttons—they've disappeared from the Windows menu. You can open any mode in a separate window by Control-clicking the appropriate button.

The PIM modules have received a makeover, especially Calendar: Clearer and more versatile, it offers multiday events displayed as a banner; buttons for quick access to day, week, and month views; a variety of Custom Views; and the ability to display appointments by Category.

Entourage looks great, but suffers from a lack of interface refinements, relative to Office's other four apps. It implements drag and drop haphazardly—you still can't drag email addresses between a contact and the



With its new transparency support and better QuickTime export, we might actually start using PowerPoint.

body of an email (though good old cut-and-paste still works). Also missing is Palm integration, but that's Palm's fault—the company hasn't yet released a conduit development kit for OS X.

## Excel

Excel's basic functionality has changed little, but it offers some substantial appearance improvements, such as antialiasing and transparency options. You can now customize keyboard shortcuts, allowing you to restore the keyboard commands lost in Excel 2001 (such as Command-B to blank a cell's contents) with just a little effort. Excel X also adds an autosave feature called DataRecovery, which creates a snapshot of your workbook at set intervals.

The most obvious change is visual. Excel exploits Mac OS X's Quartz graphics engine, so you can use real transparency when overlapping elements—our charts never looked so good or were so easy to read. And the Quartz antialiasing smooths out those graphs and charts so you get stunningly vivid results.

## PowerPoint

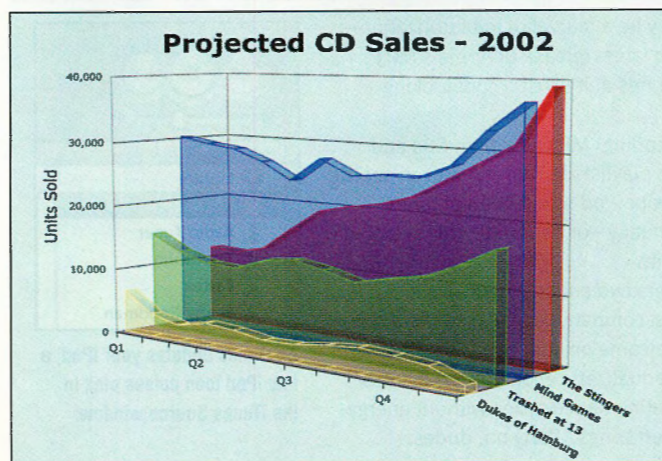
Of the four apps, PowerPoint X exhibits the fewest changes—most notably, it adds

transparency support. Perhaps the most welcome improvement, though, is the ability to save all the components of a presentation in a single folder, which Microsoft calls a PowerPoint Package, making it easier to email or otherwise pass along that presentation. A QuickTime movie of a presentation now acts more like the original, using transitions, hyperlinks, and buttons—terrific for posting on the Web.

## The Verdict

Rather than spend time and energy fully redesigning and adding a boatload of new features to its productivity suite, Microsoft spent the past year bringing the millions of lines of Office code to Mac OS X. The end result justifies that decision—Office v. X is a set of real Mac OS X applications that smartly implement the Aqua interface. The apps install in a minute, they're rock solid, and they're fast. If you need an excuse to move up to Mac OS X, Microsoft Office v. X might just be it.—Joseph O. Holmes

**good news:** Fast and solid. Aquafied! Retains most of Office 2001's features and adds some new ones.  
**bad news:** Retains all of Office 2001's annoyances. Expensive upgrade.



With the addition of transparency and antialiased lines and fonts, Excel charts never looked as good as they do in Office v. X for Mac.



## iPod

### hardware

**Company:** Apple

**Contact:** 800-692-7753, [www.apple.com](http://www.apple.com)

**Price:** \$399

**Requirements:** FireWire-equipped Mac, iTunes 2, Mac OS 9.x (Mac OS 9.2.1 recommended) or Mac OS 10.1 and later

**Y**ou own a Mac because it's the world's most elegant, easy-to-use, and powerful personal computer. The iPod brings the same Apple family values to the world of MP3 jukeboxes.

Coupled with Apple's new iTunes 2 MP3 app, the iPod makes it a breeze to organize, transfer, find, and play an enormous amount of your favorite music. We crammed its 5GB drive—4.6GB, actually—with nearly three days' worth of 128-, 160-, and 192-Kbps tunes. Apple claims the iPod will store up to 1,000 4-minute songs in 160-Kbps MP3 format.

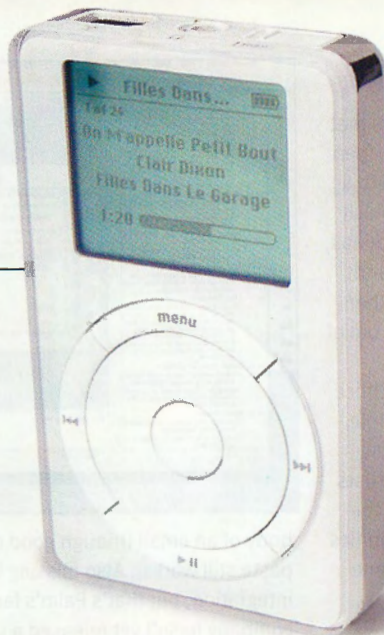
The iPod sounds great as well. Apple includes a somewhat uncomfortable pair of earbuds equipped with 18mm, rare-earth Neodymium-magnet transducers that pump out plenty of sound. However, if you really want to hear the iPod at its best, upgrade the earbuds or plug the iPod into a set of good speakers that can take full advantage of its 20Hz-to-20,000Hz frequency response.

Compared with other hard-drive-based MP3 jukeboxes such as Archos's Jukebox HD-MP3 Recorder (*Reviews*, Dec/01, p50) or

**Carry your entire CD collection in your pocket with Apple's easy-to-use iPod.**

Creative Labs' Nomad Jukebox (*Reviews*, Dec/01, p70), the iPod is downright tiny. At about 4 by 2.5 by .75 inches and 6.5 ounces, it fits comfortably in your pocket.

In addition to its teensy-weensiness, what sets the iPod apart from other jukeboxes is its FireWire port. Not only does it provide far faster MP3-file uploading than other jukeboxes' USB ports—about 1 second for a 3-minute song in our testing—it also allows the iPod to function as a bus-powered portable hard drive. We used it to move hefty graphics and QuickTime files between office and home—so convenient. What's more, we were able to install both Mac OS 9.2.1 and Mac OS 10.1 on our iPod and use it as a boot drive. The folks at Apple told us that they don't support the iPod as a boot drive, but that it should work as such on most Macs. It worked for us.



PHOTOGRAPH BY W. B. JONES

The iPod's controls consist of four buttons arrayed around a comfortably large scroll wheel with a central selection button. Playlists, artists, songs, and settings are displayed on a 2-inch (diagonal) LCD screen with a remarkably bright backlight. A top-mounted Hold button locks all controls, useful when your iPod is jostling around in your pocket—and 20 minutes of skip protection keeps the jostling from interrupting your tunes.

A built-in rechargeable Lilon battery provides up to 10 hours of playing time and recharges quickly when you plug the iPod into your Mac's FireWire port. An AC adapter is also included for recharging the iPod when you're away from your Mac.

Although we rated the iPod as *Freakin' Awesome*, it's not without its faults. It has no onboard equalization, you can only change a song's volume when you've chosen that song in the display, the case and LCD cover scratch easily, and the open FireWire port is just begging to be filled with pocket lint. A carrying case would have been nice as well.

That said, it's a great little unit. One more thing: When you get your hands on an iPod, scroll down the main menu to About, hold down the selection button for three seconds, and you'll be treated to a game of Breakout. It's a nice touch—and a tribute to one of Apple's founders: Steve Wozniak wrote Breakout. —Rik Myslewski

## iTunes, Take 2

**A**pple's iPod may be a marvel of miniaturization—but without the latest release of Apple's MP3 jukebox software, iTunes 2, it's just a cool-looking portable hard drive.

After ripping (encoding) MP3 files from CDs and organizing them into playlists in iTunes, you can set the software to update your iPod's collection of tunes automatically or manually—or to update only selected playlists automatically.

iTunes 2 also offers two enhancements that unfortunately don't accompany your files to the iPod—but they're plenty welcome on your Mac. First, it now provides a 10-band equalizer; second, it has a cross-fade function for creating dance mixes without energy-sapping gaps between songs. Party on, dudes.



**As iTunes updates your iPod, a tiny iPod icon pulses pink in the iTunes Source window.**

**good news:** Huge capacity. Easy to use. Rechargeable battery. Excellent interface. **bad news:** No equalizer. No master volume control. No carrying case. Scratches easily. Pricey.





# Corel Graphics Suite 10

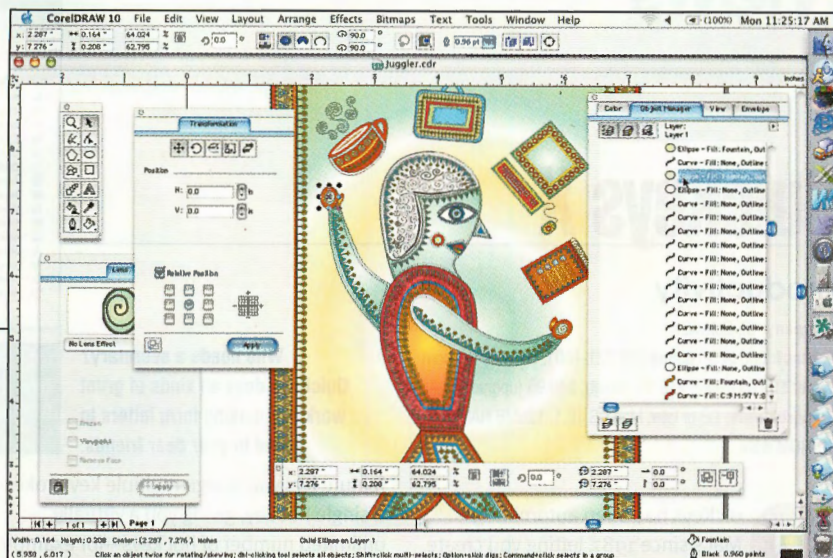
## design & graphics

**Company:** Corel

**Contact:** 613-728-8200, [www.corel.com](http://www.corel.com)

**Price:** \$569 (SRP), \$499 (street)

**Requirements:** G3 or higher, Mac OS 8.6 or later, 64MB of RAM (128MB RAM for Mac OS X), 250MB free hard disk space



The flagship CorelDraw program offers just about every illustration feature imaginable, as well as a hefty supply of design tools.

Corel has packed virtually every graphics application a home or professional user needs into the Corel Graphics Suite 10 box. The big guns include CorelDraw 10, a vector and design application; Photo-Paint 10, a bitmap editor; and RAVE, a Web animation app.

But wait, there's more! You also get CorelTrace 10 for converting bitmapped images to vector format, 2,000 clip-art images, over 500 stock photos, and 2,000-plus fonts. Also included are Canto's impressive Cumulus Desktop LE, an image cataloger for keeping track of all that clip art, and a copy of Font Reserve for font management.

The three main apps look and work a lot alike—once you learn how to align text to a path in one app, you can do it in all of them. The entire suite makes good use of user-definable command bars and tabbed palettes. A properties bar across the top of the screen provides instant access to the settings for any tool you use.

One of our favorite features is the Suite's PDF-creation abilities, which support PDF 1.4 transparency so you don't have to render vector images as bitmaps.

You can create PDF documents with multiple page sizes as well as embedded fonts, color profiles, and URLs.

CorelDraw, the cornerstone of the suite, is by far the best of the bunch. Its new vector tools include support for drag-and-drop gradient transparencies, drop shadows, and blends—all of which you can edit by hand or alter numerically from the properties bar. Also new is a 20-step Undo palette similar to Adobe Photoshop's History palette.

We wouldn't recommend CorelDraw's design tools over those of QuarkXPress, but CorelDraw's vector tools make it a powerful program. You can create multisize, multipage documents within CorelDraw—a feature that makes it easy, for example, to combine stationery, envelope, and business-card designs in a single document.

For bitmapped images you have Photo-Paint. The two best things about Photo-Paint are its drop-shadow and text-on-path features. To tweak a drop shadow, you simply drag it where you want it—no more trial and error in a dialog box.

And creating text graphics is a breeze: Once you've mapped text to a path, both the text and the path itself are fully editable.

Photo-Paint has a lot of other impressive

features, including filterlike photo effects that can remove red-eye in photos or blur parts of an image. It offers good masking and Bézier tools as well. Other big pluses include Painter-like artistic effects such as Crayons, Impressionist, and Crystallize, as well as some strong texture tools.

Rounding out the suite is RAVE, Corel's entry into Web animation. RAVE comes equipped with basic animation tools, including tweening, keyframe animation, rollover creation, and Flash export. It also includes a few nifty tidbits like interactive object manipulation and the ability to add sound to animations. RAVE will please all but the most demanding Web animators, although it lacks the scripting of Flash 5 or the sophisticated HTML and JavaScript output of Fireworks.

Overall, Corel Graphics Suite 10 is a good package at a good price. CorelDraw is the equal of Freehand or Illustrator, and while we wouldn't give up Photoshop or Flash 5 just yet, Photo-Paint, RAVE, and CorelTrace are all solid applications. Our main complaints concern Graphic Suite's user interface and speed. While the interface is configurable, it consumes a lot of real estate. Also, the whole package, especially Photo-Paint, is a bit on the sluggish side under OS X. That said, if you don't already own a full library of graphics apps or are thinking about upgrading your current stable for OS X compatibility, Corel Graphics Suite is pretty sweet. —Rick Sanchez

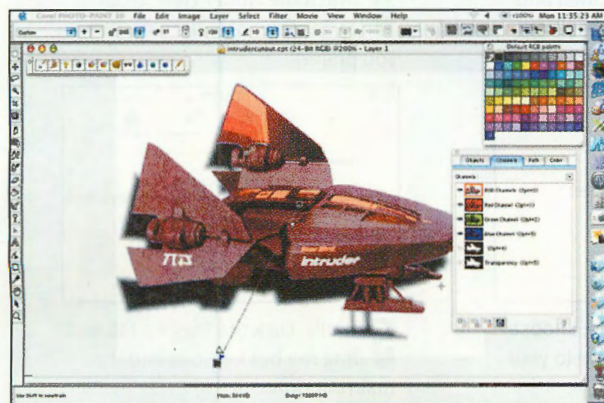


Photo-Paint doesn't quite measure up to Photoshop, but its interactive drop-shadow tool is a winner.

**good news:** Comprehensive suite of tools. Configurable interface. Carbon.  
**bad news:** Applications poky under Mac OS X. No image slicing for Web graphics.





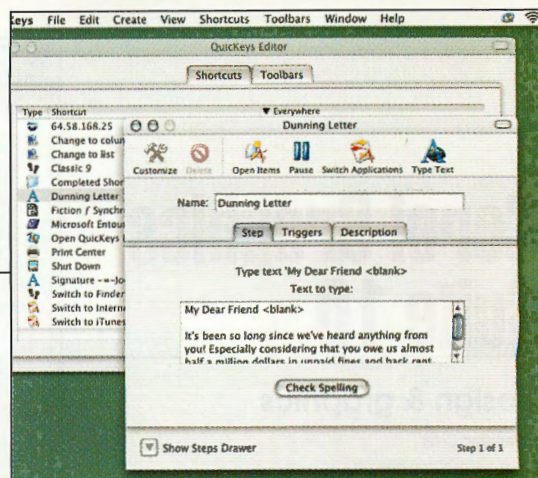
# QuicKeys X

## productivity



**Company:** CE Software  
**Contact:** 800 523-7638 or 515 221-1801, [www.cesoft.com](http://www.cesoft.com)  
**Price:** \$59.95 (SRP), \$49.95 (street), \$49.95 (upgrade)  
**Requirements:** G3 or later, Mac OS 10.1, 128MB RAM, CD-ROM drive

**Who needs a secretary?**  
**QuicKeys does all kinds of grunt work like making form letters to send to your dear friends.**



Find a demo of QuicKeys X on The Disc.

**Q**uicKeys has been automating Macs since 1987, letting you create shortcuts for almost any task you can do with a mouse or keyboard. QuicKeys X, rewritten from the ground up as a Cocoa application for Mac OS X, offers many of its predecessor's handy tricks, but because of the fundamentally different nature of Mac OS X, it lost some of its most powerful and flexible features in the translation.

QuicKeys X installs as an application rather than an extension (Mac OS X doesn't use extensions) that you can configure to either launch at startup or login. As with earlier versions, you can activate shortcuts in a number of ways: with a designated *hot key*, automatically at a certain time of day, after launching an application, from a button on any QuicKeys toolbar, or immediately after startup or user login. The new Sticky Keys

feature lets you assign multiple keystrokes as a single hot key, giving you a virtually unlimited number of hot keys—for example, you could set Command-D-1 to insert a designated snippet of text, and Command-D-2 to insert a different snippet.

QuicKeys X knows many of its predecessor's shortcut tricks: paste text; insert the current date and time; launch applications or specific files; shut down, sleep, or restart your Mac; mount network volumes; launch a URL; and other tasks. It's a pleasure to mount a network volume with the press of a single hot key, bypassing dialogs and password requests. Mac OS X-specific talents include switching Finder views and running Unix commands. But because QuicKeys X is an application, all shortcuts run more slowly than they do in earlier versions of QuicKeys, though certainly fast enough to still save you time.

QuicKeys adds a lot to OS X, but we pine for many missing features. The program no longer can reliably select or activate specific menu items, buttons, or windows. Instead, you have to record cursor movement and mouse clicks. Power users will especially miss sophisticated sequencing features like branching, and pausing playback to wait for a window or button.

To be fair, QuicKeys X is an indispensable addition to Mac OS X, saving you from all kinds of tedious typing and mousing. We found dozens of uses for QuicKeys X, and we keep finding more.

—Joseph O. Holmes

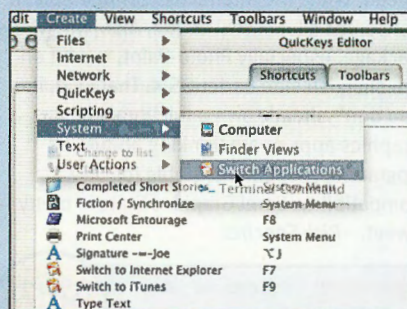
**good news:** Automates actions in Mac OS X. Improved interface. Lower price.

**bad news:** Fewer and more-limited features than in earlier versions.

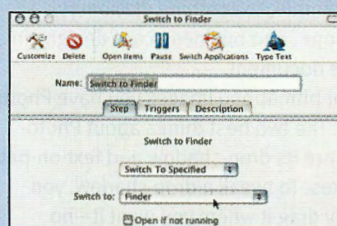


## Cutting Short

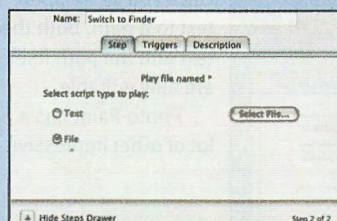
**Q**uicKeys X makes short work of shortcuts: Here's how you'd create a shortcut that makes the Finder the active application, switches the Finder view to List, and hides other applications. (First, download the *Hide Application Windows (\*)* AppleScript from [www.apple.com/applescript/macosx/toolbar\\_scripts](http://www.apple.com/applescript/macosx/toolbar_scripts).)



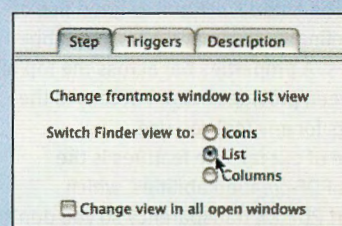
**1** Create a new Switch Applications shortcut.



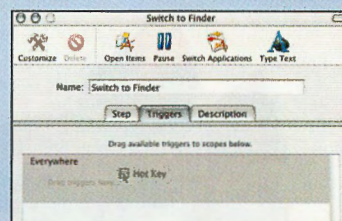
**2** Select Switch To Specified and specify Finder in the resulting Switch to pull-down menu.



**3** Create a Scripting step; choose Select File and navigate to your downloaded AppleScript.



**4** Switch the Finder view to List (or Columns or Icons view if you prefer).



**5** Finally, click the Triggers tab and drag the hot key icon into the main window.



# CodeWarrior Pro 7

## productivity

**Company:** Metrowerks

**Contact:** 800-377-5416 or 512-997-4700,  
www.metrowerks.com

**Price:** \$599 (SRP), \$299 upgrade

**Requirements:** Power Mac (G3 or later for OS X development), Mac OS 8.6 or later (10.1 for OS X development), 64MB RAM (128MB for OS X development), 500MB free hard disk space

**M**etrowerks CodeWarrior has been the predominant platform for C and C++ coding on the Macintosh platform since it displaced THINK C during the PowerPC transition in 1994. As a Mac OS X–native compiler, it remains the only *sensible* tool for Carbon development and represents Metrowerks' first steps toward pure (Cocoa) Mac OS X development.

The traditional CodeWarrior IDE (Integrated Development Environment) is alive and well, and it remains one of the best code-browsing environments in existence. The IDE still features an almost absurd range of stationery (supporting dozens of project types, from standard C programs through Java applets), three languages (C, C++, and Java), and a variety of output types (such as PEF, MACH-O, and x86 Windows).

Some of CodeWarrior's traditional annoyances are also alive and well. Error reporting is still technically correct but generally repetitious—a single typo in a header file, for example, can create hundreds of error reports in a complex project. An option to suppress repeated errors from the same file would make it considerably easier to focus on distinct

errors without recompiling each time. The CodeWarrior IDE also misses some obvious chances to take advantage of Mac OS X's Unix layer—standard flex and bison plug-ins, for example, would have made code exchange much easier.

The command-line compiler is potentially a welcome addition, as it opens up the possibility of using traditional Unix-style workflows and tools (make, flex, bison, and so on) with the CodeWarrior compiler. However, integrating this compiler into existing Unix makefiles is slightly maddening, due to some highly nonstandard behaviors (see “mwccppc, mwldppc, make, and madness,” below).

As of version 7, CodeWarrior tools don't support Cocoa; in turn, Cocoa doesn't support C++, so you must develop in either Objective C or Java. CodeWarrior doesn't sport an Objective C compiler, and the Java compiler targets traditional Java development—you can build applets, but not Cocoa applications.

In general, the CodeWarrior compiler generates somewhat tighter code than GCC

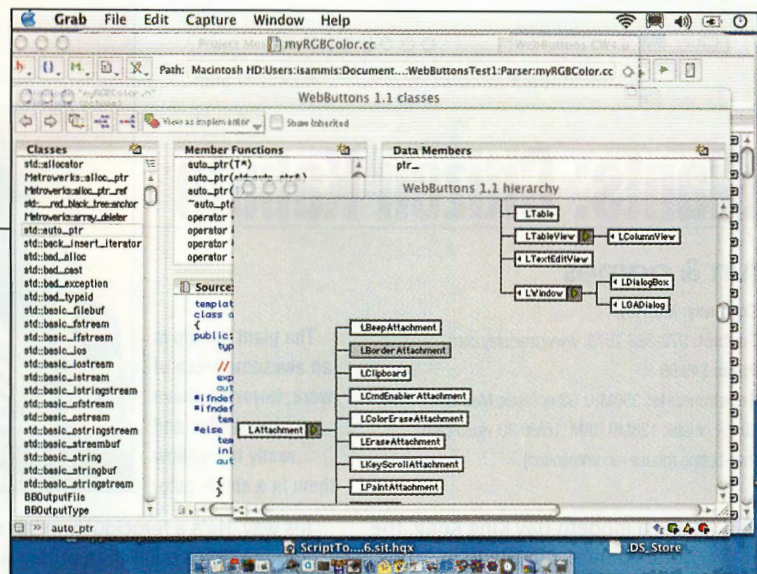
(GNU Compiler Collection; GCC 2.95.2 comes with the Mac OS X 10.1 Developer Tools). In our tests using the Bytemark benchmark, the CodeWarrior tools produced consistently quicker code than GCC did—and yes, we turned on all optimizations in each compiler to avoid the common Bytemark flaw of compiler-specific optimizations.

So, is CodeWarrior Pro 7 a good buy? If you have any significant amount of existing code, there's no question—CodeWarrior Pro 7 is one of the best solutions for Carbon development. The IDE is outstanding and provides excellent code-management tools for dealing with large projects. If you want to do more Unix-style or Cocoa development, stick to Apple's tools—but keep your eye on future versions of CodeWarrior.

—Ian Sammis

**good news:** Solid Carbon development platform. IDE is first rate.

**bad news:** Difficult to integrate command-line tools with existing Unix tools. No Cocoa tools.

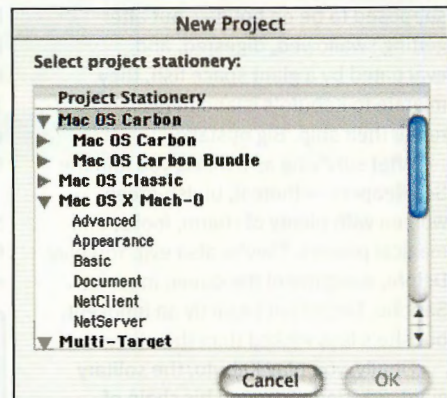


CodeWarrior still rules—unless you're developing Unix or Mac OS X Cocoa apps.

## mwccppc, mwldppc, make, and madness

**N**ow that command-line versions of Metrowerks' compilers have emerged from the Thrill-Seekers folder and are part of the main distribution, it's tempting to use them for mainstream Unix development. Here's one reason to fight that temptation.

Most C compilers, when generating object files (compiled code not yet linked to an application), replace the .c extension on the file name with the .o extension; mycode.c, for example, would compile to mycode.o. By contrast, Codewarrior appends the .o, so the file becomes mycode.c.o. This is a minor difference, yes, but it requires that you rewrite compile scripts to compensate, or tell the shell to always include -ext o after compiler calls. That's not too hard—but now you realize that scripts that try to generate libraries (fairly common in Unix code) will fail unless you rewrite them to use mwldppc instead of the usual ar and ranlib.



CodeWarrior's mountains of stationery will get almost any project off to a flying start.



## Giants: Citizen Kabuto

### fun & games



**Company:** MacPlay

**Contact:** 972-386-7575, www.macplay.com

**Price:** \$49.99

**Requirements:** 350MHz G3 or faster, Mac OS 10.0.4 or later, 128MB RAM, 16MB 3D video card (two-button mouse recommended)

The giant Kabuto is an awesome piece of work, towering above his enemies and ready to swallow them in a single gulp.



**L**ike a modern-day King Kong, the title character in *Giants: Citizen Kabuto* is over 30 feet tall, controls a monster-laden tropical island, and carries around curvaceous females in his fists. But Kabuto's cuties aren't his love interest. They're his lunch. We liked this game at once.

*Giants* is a peculiar game, a blend of hot-and-heavy action, off-the-wall British humor, and some real-time strategy elements, such as building bases and managing resources. The RTS components will make you stop and think, but frenzied action rules.

*Giants* takes place on a chunk of some lost planet, floating through space. The sojourning chunk contains an incredible set of islands, once the home of a beautiful ocean-dwelling race called the Sea Reapers. The Reapers, seeking security, created a giant to protect them. Unfortunately, the giant eventually turned against his makers and drove them back to the sea.

As you play the game, you progress through three species. First you're one of a small band of five Meccaryns: high-tech geeks with cockney accents. The Meccs are supposed to be on holiday, but after getting swallowed, digested, and evacuated by a giant space fish, they migrate to Kabuto's island to rest and repair their ship. Big mistake.

After surviving as a Mecc, you join the Sea Reapers—ethereal, bluish-green women with plenty of charm, looks, and magical powers. They're also evil. You play Delphi, daughter of the queen meanie, Sappho. Delphi isn't exactly an innocent, but she's less wicked than the others.

Finally, you play Kabuto, the solitary giant, wandering around his chain of tropical-island paradises, stomping, destroying, or eating anything that gets in

his way. He's a ferociously mean dude and ten times taller than other characters. He roars a lot and munches a variety of imaginative indigenous creatures to keep up his strength.

As each of the main characters, your choice of weaponry will vary. The high-tech Meccs use raw firepower, such as pistols and missile launchers, and occasionally take to the air with flying jet packs and a gyrocopter. Sea Reapers rely more on swords, archery, and a wide array of magic spells, while Kabuto uses strength, speed, and a sharp set of teeth. All three fighting approaches are fun—and beautiful. *Giants* may be the prettiest game you'll ever play. The graphics are drop-dead gorgeous, with brilliant colors, surreal islands, tropical trees, rippling water, and sunlight glare.

The game isn't perfect, of course. We can't wait to try *Giants* in multiplayer mode, but we'll have to wait; according to MacPlay, a patch is under development. Also, like a growing number of today's games, it lacks an in-mission save. That's OK in some of the shorter missions.

If you goof up, it's easy enough to play through again. But when missions get longer, dying inches short of the final goal is maddening. The game's strenuous requirements may frustrate you as well: The stated system requirements are definitely *minimum* requirements, and *Giants* is built exclusively for Mac OS X.

But hey, maybe that's a plus. If you've been putting off upgrading, start digging for your wallet. *Giants* may be your best excuse yet. —John Lee

**good news:** Chance to play three species and meet, beat, or eat your enemies. Laugh-out-loud humor.  
**bad news:** Steep system requirements. No in-mission save.



### Tread Carefully

**G**iants is a rich, deep story, and you'll encounter a whole zooful of odd critters, some of them deadly. They include:

#### Smarties

A diminutive race with big heads and Scottish accents. These are useful little buggers. Treat them well, and they'll build bases for you as well as procure new weapons, spells, and vehicles.



**Vimps** Alien cowl-like creatures. Vimps are Kabuto's favorite food source—other races can protect them and watch the big guy go hungry.



**Chargers** Massive, territorial beasts who charge anyone who ventures close to their nests. Hint: Chargers are thick-skinned, so shoot for the mouth.



**Rippers** Nasty killers who burrow underground in overpowering numbers. When they pop up and close in, shoot fast or start running.





# RioVolt SP250

## hardware

**Company:** Sonicblue

**Contact:** 800-468-5846, [www.riohome.com](http://www.riohome.com)

**Price:** \$179.95 (SRP)

**Requirements:** Power Mac, Mac OS 9 or later,  
CD-ROM drive

**O**ur eyes are bigger than our pocketbooks, and thanks to our beloved credit cards, this will likely never change. But rather than go broke plunking down the plastic every time some new-fangled, high-tech gizmo begs us to buy it, we'd rather be smart in our spending habits. Sonicblue's RioVolt SP250 is a wise, though pricey, investment that actually saves you money in the long run because it plays MP3s from CDs instead of using expensive memory cards, thus answering digital music's conundrum of finding a way to take CDs *and* MP3s to go.

The RioVolt SP250 is a nifty-looking device that does triple duty as an audio CD player, an MP3 CD player, and an FM radio (OK, it also handles WMA CDs if you dare to do Windows), and supports CD, CD-R, and CD-RW media. The clamshell casing is sleek and sturdy (and sports the colors of this reviewer's favorite NFL team), and it features controls on top that are easy to operate no matter how big your paws are. It also comes with two rechargeable AA NiMH batteries, an AC adapter, an on-wire remote, 8-minute MP3 and WMA CD shock protection (3-minute protection for audio CDs), EQ, and Apple's iTunes software.

The player ships with two sets of ear appliances—a set of folding hook-over-the-ear headphones and a pair of earbuds. Though we appreciate the generosity, the headphones, in a word, *suck*—they lack warm bass tone and produce an overabundance of shrill midtones. While these headphones simply grate, the earbuds sound simply *great*, pushing out full sound sans distortion even at high volumes, with smooth bass frequencies, crisp highs, and fine separation in the midtones. The earbuds tended to pop out of our small ears, but with our own properly fitting headphones, the RioVolt's sound is mighty impressive. Whatever headphones you use, you can plug them straight into the



PHOTOGRAPH BY W. B. JONES

**A true portable, the RioVolt allows you to play over ten CDs' worth of music without having to haul around all ten discs.**

player or connect the remote control between the headphones and the RioVolt; the remote gives you access to simple functions (play, stop, volume, CD-FM-radio toggle, forward, back, and so on) when you tuck the player into the included faux-leather carrying case, which features a belt clip and detachable shoulder strap.

The RioVolt plays MP3 and WMA CDs without skipping a beat (we ran a mile with it), and the battery life is amazing. We looped an MP3 CD for 13 hours straight, and the battery indicator still displayed a quarter charge before we nodded off to sleep. The player also supports ID3 tags so you can scroll through your MP3 song list. With audio CDs, the battery life is much shorter—the player died after 3.5 hours of play. Though the RioVolt claims 3-minute shock protection with audio CDs, we got it to skip after a minute when we repeatedly tossed it up and down.

Our only other annoyance is with iTunes itself, which, in the bundled version, doesn't allow you to burn an MP3 CD from a playlist, meaning you can't dictate the song order. The fix is easy enough: iTunes 2 lets you burn MP3 CDs from playlists, and it's a free download from Apple's Web site (you still have to add an .mp3 extension, or the file won't show up on the RioVolt).

If you're contemplating purchase of an MP3 player, the RioVolt SP250 lets you carry limitless MP3 files and adds audio CD and radio play. Sure, it's pricey, but when you consider how expensive additional memory packs are for MP3 players, the RioVolt looks like a good deal.—*Kris Fong*

**good news:** No need to lug along a dozen CDs with your CD player. Earbuds provide great sound. Awesome battery life. **bad news:** Sound from headphones grates like Parmesan cheese. Pricey.



## Disc or Pod?

**D**ecisions, decisions. *Freakin' Awesome* as the Rio Volt is, there's another worthy candidate—Apple's iPod (see *Reviews*, this issue, p44). Here's a little feature comparison to help you pick the right MP3 player for your needs.

Model	iPod	Rio Volt
Hardware Dependency	Mac required	CD (audio or MP3) required
Total Capacity	5GB (1,000 songs)	700MB (140 songs) per CD
Extras	FireWire, sex appeal, bootable hard drive	FM tuner, remote control, EQ, plays standard audio CDs



# ConceptDraw Professional 1.7

## design & graphics

**Company:** Computer Systems Odessa

**Contact:** [www.conceptdraw.com](http://www.conceptdraw.com)

**Price:** \$249 (SRP), \$125 (upgrade)

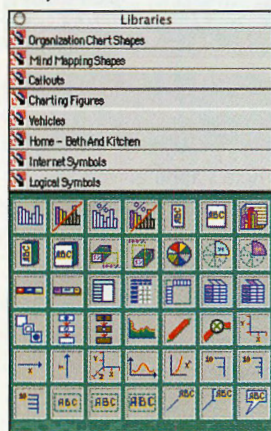
**Requirements:** Power Mac 603e or higher, Mac OS 8.6 or later, 32MB RAM



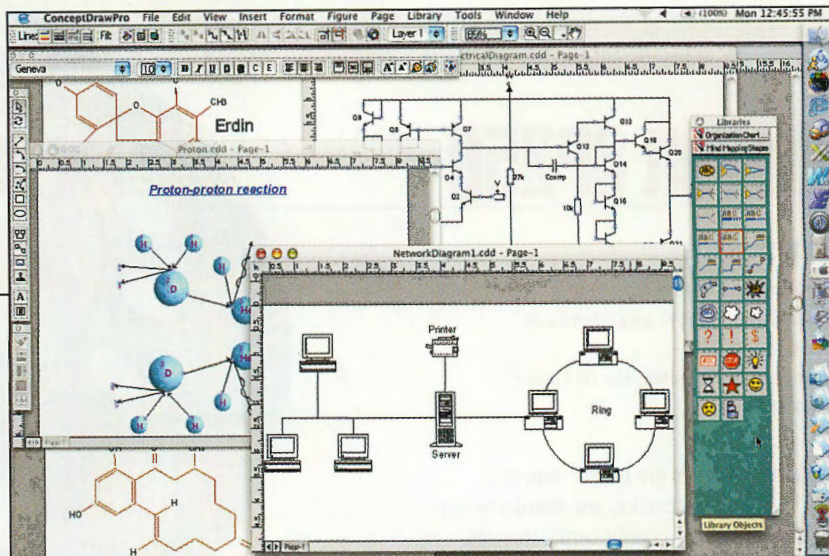
Find a demo of ConceptDraw 1.7.1 Pro on The Disc.

Structuring a department, building a Web site, or planning a circuit design is always easier when you're organized. One of the best ways to organize structure is to create a visual "big picture," and ConceptDraw Professional does just that, using some of the most robust technical illustration, flowchart, and diagram tools available on the Mac.

ConceptDraw Professional categorizes over 2,800 objects and shapes into 100 topical libraries, grouped together roughly by professional categories like Business, Chemical, Engineering, and so forth. The Business group contains libraries for Project Timelines, Organization Charts, and Form Design; in the Home & Office group are Cabinets, Electronics, and Appliance libraries. The objects within each library vary from simple placeholder boxes to graphical representations of real-world items like a telephone, a map of Mexico, or a Power Mac G4 Cube. If you want to mix and match genres, ConceptDraw lets you open as many libraries as you want and keep them tabbed in the Libraries palette for easy access.



All the symbols and shapes you could want are at your service in the Libraries palette, where you can load as many topical libraries as your project requires.



**ConceptDraw Professional makes short work of creating network diagrams, flowcharts, circuit diagrams, floor plans, and almost anything else you can visualize.**

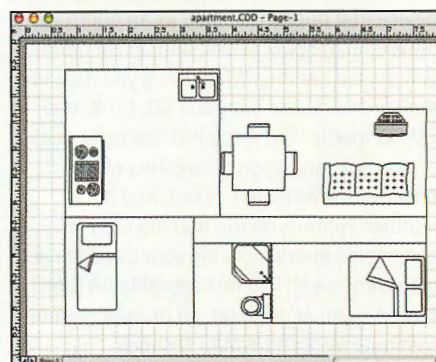
Once you get the objects into a document, linking them is simple—you just draw connector lines between objects. You can even modify connectors by selecting one and choosing new end shapes from a variety of arrows and circles, as well as line styles of varied color and thickness.

If the built-in objects don't fit your project, ConceptDraw has excellent drawing tools and import options. The tools include a full range of curved and straight-line functions, so you can create circles, octagons, or even an outline of your home's floor plan.

You can also apply colors, patterns, and gradients to anything you draw and organize your diagrams with a number of built-in functions—for example, snapping your objects to a grid or to guides. The alignment tools offer additional methods of making precise layouts. If you want to use art created in a different program, ConceptDraw can import GIF, JPG, EPS, PICT, TIFF, PNG, and TGA files as well.

Creating diagrams is great, but if you can't share them, they won't do you much good. ConceptDraw has you covered here, sporting an excellent array of export options and full cross-platform compatibility between the Mac OS (including Mac OS X) and Windows. Even if other people who need to see your work don't have ConceptDraw, you have a number of choices for sharing. The HTML export functionality is excellent, converting your boxes, text, and lines into Web pages in seconds. You can also convert documents to Microsoft's Visio format via an online tool. Selecting the

ConceptDraw-Visio Converter under the File menu opens a Web browser and takes you to a page with an upload button. Press the button and select your file, and in a few minutes you receive the converted file via email. The conversion works both ways; you can convert Visio to ConceptDraw documents—or generate Microsoft PowerPoint slides from either format.



**Want to plan the layout of your apartment? ConceptDraw Professional's libraries cover appliances, furniture, even bathroom fixtures.**

Bottom line: ConceptDraw Pro is easy to use, has a ton of features, and runs well under Mac OS X (as well as Mac OS 8.6 to 9.x). The specialized object libraries for technical fields are huge time-savers, and Visio compatibility is a lifesaver in multiplatform offices. If you need to diagram—or flowchart—anything, ConceptDraw Professional is the ticket. —Rick Sanchez

**good news:** Tons of library objects. Easy to use. Flexible drawing tools.  
**bad news:** Visio file conversion is Web based.





# Q\*bert

fun & games

9

**Company:** MacSoft

**Contact:** 763-249-7600,

[www.wizworks.com/macsoft](http://www.wizworks.com/macsoft)

**Price:** \$19.95 (street)

**Requirements:** 233MHz G3 or faster, Mac OS 8.6-9.x, 32MB RAM, 216MB hard drive space, Rage Pro or better video card

**B**ack in the days of the Rubik's Cube, a little orange guy named Q\*bert made his debut on the nascent video-game scene and became an instant hit. He was cute, he was colorful, and the game's deceptively simple concept was accessible to young and old alike. Q\*bert is still cute, but he's trapped in a temperamental, confusing game; he should have stayed in the 1980s.

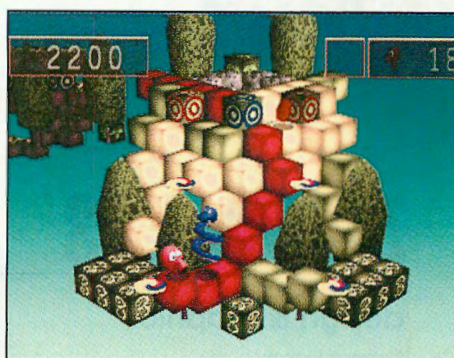
Q\*bert offers three modes of play: Classic, a remake of the 1980s arcade,



You've come a long way, baby—but not far enough: Q\*bert then and now.

pyramid-hopping original; Head-To-Head, in which two players vie to recolor their cubes first; and Adventure, in which Q\*bert hops through four wild worlds in an effort to rescue Q\*dina from the clutches of the evil serpent Coily.

The developers took some fairly extensive liberties on the original pyramid design, with mixed results. The trippy visuals and creative 3D decorations are great eye candy and nicely complement the just-left-of-center attitude that has always been part of Q\*bert's charm. Sadly, the bizarre terrain of the Adventure levels often makes it unclear which cubes actually connect to which—in a game where the whole point is to jump from one cube to the next, this is a pretty inexcusable flaw.



The game also suffers from one other major shortcoming: stability. While Q\*bert never actually crashed on us, we had to experiment with a number of different extension sets just to run the game; it had a bad habit of locking up our G4 tower. Even after we got it working, it would occasionally leave the screen a frozen, useless mass of colors when we quit the game.

We're all for reviving classic arcade games, but Q\*bert evolved in a bad way and it's unstable on the Mac.

—Rich Pizor

**good news:** Trippy visuals. Cute.  
**bad news:** Finicky. Repetitive gameplay. No network support for multiplayer.



## tell me again why you got into digital video

Wasn't it for the creativity, the chance to do cool, groundbreaking work that got noticed? Well, here's your chance to rekindle your creative spirit and learn from the best in the business. This February at the **NYDV CONFERENCE & EXPO**, an all-star cast of award-winning editors, producers and animators will conduct over 170 sessions dedicated to helping you capture, edit, design, and deliver effective digital video. Plus the chance to see the latest hardware and software from over 100 vendors, special events, giveaways and more. So what are you waiting for? Go online or call for a free conference guide.

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## ZBrush 1.23

design & graphics



**Company:** Pixologic

**Contact:** 888-748-5967, [www.pixologic.com](http://www.pixologic.com)

**Price:** \$585 (SRP)

**Requirements:** G3 or later, Mac OS 8.1–9.x, 128MB RAM, 100MB disk space, Wacom tablet recommended



Find a ZBrush 1.23 demo on The Disc.

**P**ixologic's ZBrush is an odd beast. It's sort of a 3D application, without many of the standard 3D modeling tools, and it's sort of a 2D application, without many of the basic 2D design tools. So what's ZBrush good for? We wouldn't call it the best of both worlds, but ZBrush's unique tool set lets you paint in 3D without first creating an underlying structure, à la traditional 3D modeling; you can also create detailed textures quickly and easily. Those qualities would make ZBrush a handy companion to full-featured 2D and 3D apps, but its import and export capabilities—BMP (Windows Bitmap), PSD (Photoshop), and PICT (native Macintosh) files—are limited.

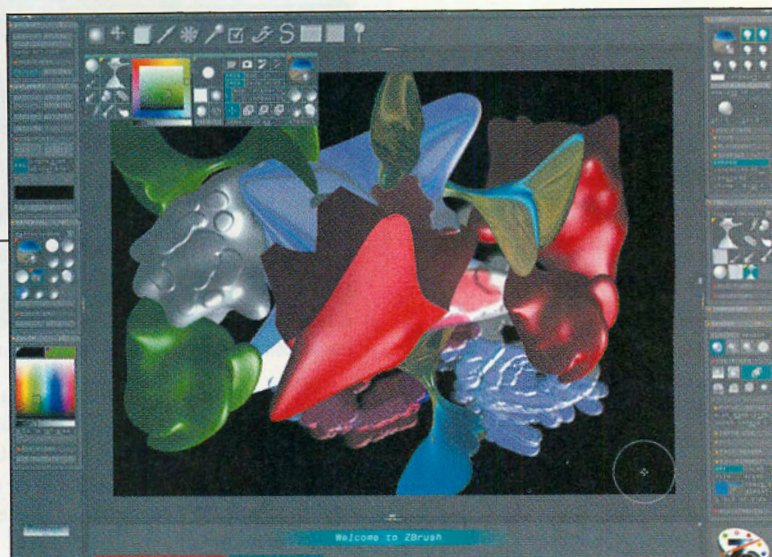
You can still create stunning stand-alone artwork in ZBrush. The gallery on Pixologic's Web site shows what ZBrush can do in the right hands. Lush textures, realistic lighting, and images with depth abound—but creating such work involves battling a tough learning curve capable of stymieing even the most adept Mac digital artist.

The first thing you notice about ZBrush is that it takes over the entire screen. The menu bar is there, but it contains only the

standard Apple menu, a File menu with one item (Quit), and a Help menu offering nothing more than Apple's Balloon Help—which ZBrush doesn't support. ZBrush is not the first program to reduce the menu bar so drastically, but unlike other programs, it doesn't compensate with a custom menu bar of its own.

ZBrush's commands and controls are contained in palettes that border the left and right sides of the screen. The Library palette holds a vast array of 3D objects that you can drag to the workspace to push, pull, and otherwise manipulate like clay. Similarly, the Texture palette adorns your brush with a wide assortment of stroke-on textures.

Unlike a dedicated 3D application, ZBrush doesn't have multiple view windows (top, left, front, camera, and so forth) or visible light or camera objects. You control a scene's lighting by adjusting light sources numerically through a palette, not



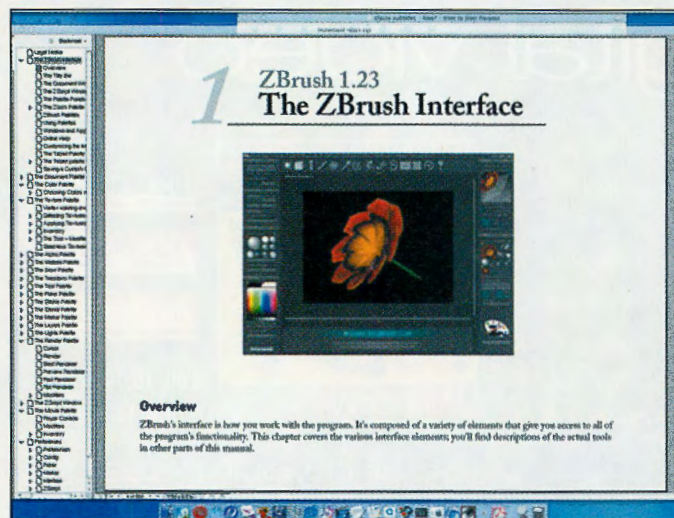
ZBrush takes 3D doodling to new levels, but good luck learning how to actually use this Hydra-like program.

by visually moving a virtual light source around the scene. An experienced 3D artist will likely feel handcuffed by the program's limited viewpoints (there's only one) and the lack of a camera, but the totally non-Mac interface is probably the biggest hurdle to overcome. At best, it is interesting; at worst, a die-hard Mac user with little experience on other platforms will immediately shy away from this intimidating, dark interface.

Further alienating the Mac crowd, ZBrush doesn't respond to standard Apple events. Double-clicking a document's icon opens Zbrush, but not the document; and the program doesn't automatically quit when you shut down or restart your Mac. The latter is especially annoying—upon restart, ZBrush dutifully appears in the foreground but doesn't respond when the system tells it to quit. Instead, it requires that you manually quit via Command-Q or the emaciated menu bar.

ZBrush is clearly not a Mac application. It doesn't look like one, it doesn't behave like one, and there's no hard-copy manual to hold your hand as you learn the program's strange environs. The 300-page PDF manual is great—but ZBrush is not easy to learn, and the value of a printed manual as a learning aid can't be overstated.

Overall, ZBrush is an interesting application: Its drawbacks, while significant, aren't insurmountable, but in light of the epic learning curve, high price tag, and lack of a printed manual, we're not inclined to bother. —Mike Caputo



A second monitor is the only way to keep ZBrush's PDF-only manual handy. (Note the Dock—ZBrush doesn't run natively in Mac OS X, but it does fine in Classic.)

**good news:** Interesting texture-making tools and scripting system.  
**bad news:** Vertical learning curve. Non-Mac interface. No hard-copy manual.





# PowerTicker 2.1.1

## utilities

**Company:** Galleon Software

**Contact:** 416-304-1325, [www.galleon.com](http://www.galleon.com)

**Price:** \$49.95 (SRP)

**Requirements:** Power Mac, Mac OS 8.1-9.x

**PowerTicker's summary window provides useful information about your holdings—and you'll find more behind the Details and News tabs.**

**P**owerTicker does only one thing, but it does it very well. This browser gathers information about securities, mutual funds, security indexes, and currency exchange rates, and presents it all in a customizable interface.

The flexible and versatile interface allows you to choose either single or multiple scrolling tickers, as well as control the speed and direction of scrolling and the placement of the tickers. You can also select the ticker's font, font size, and background color.

PowerTicker displays detailed information about each tracked security

in a summary window. This data includes your choice of P/E ratio, 52-week high and low prices, trading volume, earnings per share, opening price, and percentage change for the day.

Other customization options include visual, audio, and email alerts of changes in a security's value. You can specify separate alert criteria for gains and losses based on either the amount or the percentage change of a security's value.

Although PowerTicker's Portfolio function tracks the gains and losses of your securities, it doesn't provide a technical analysis of a stock's performance over time

or compared to other holdings. Another limitation is that its data sources have at least a 15-minute delay from real-time trading. Even so, PowerTicker's customizable gathering of securities information makes it the best value we've seen for tracking financial data on the Mac easily and inexpensively.

—Steve Becker

**good news:** Easy to use. Flexible interface. Provides and organizes lots of useful security information.

**bad news:** Doesn't analyze portfolio data. No real-time quotes.

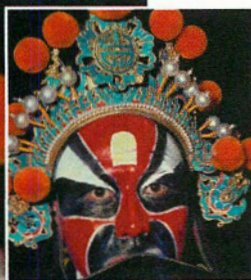
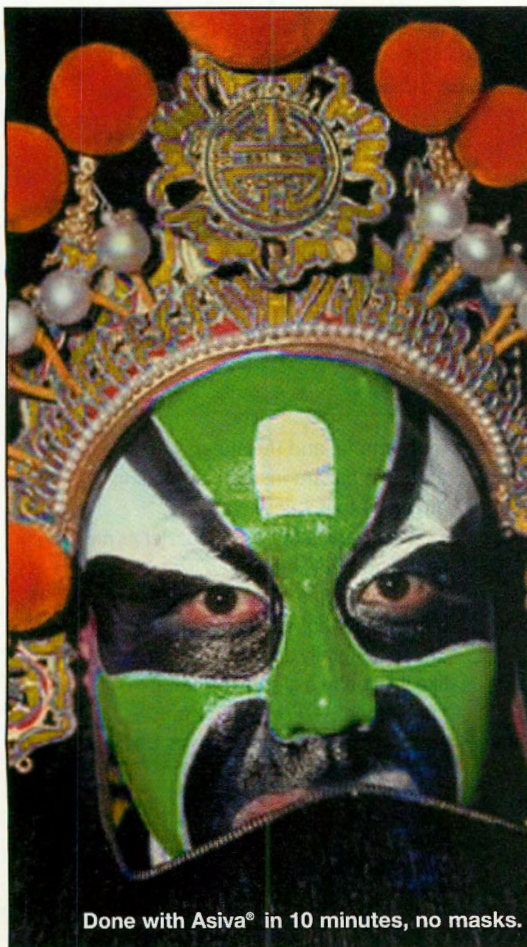


Apple Computer Inc.			
<b>AAPL</b>		Current <b>17.57</b>	Change <b>-0.03 -0.17%</b>
Current	Details	News	
<b>Today</b>		<b>Last Trade</b>	
Open	17.73	Price	17.57
High	18 2/5	Volume	N/A
Low	17.44	Bid	17 2/5
Volume	4,893,200	Ask	17 1/2
Previous Close	17 3/5	Exchange	Nasdaq
52-week High	27.12	Source	Yahoo US
52-week Low	13 5/8		
Last Trade	N/A		
Last Update	01:02 on 11/01/2001		

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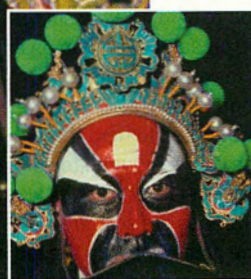
Find a  
PowerTicker  
2.1.1 demo  
on The Disc.



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## Discus CD Labeling Software

### design & graphics

9

**Company:** Magic Mouse

**Contact:** 415-669-7010, [www.magicmouse.com](http://www.magicmouse.com)

**Price:** \$39 (SRP)

**Requirements:** System 7.0-Mac OS 9.x

Labeling CDs is a commonplace task in these days of "Rip. Mix. Burn." While scrawling with a Sharpie works in a pinch, what if you want to snazz up or personalize your CDs with artwork and photos? You pick up Magic Mouse's Discus, that's what.

Discus's documentation is minimal, but thanks to the program's easy-to-use interface, you may not even need it. Launch Discus, select the type of label you want (the choices include CD, Mini CD, Business Card

Discus makes short work of labeling your CDs with graphics, text, and/or your own doodlings.

CD, Jewel Case Base, Jewel Case Lid, and Folding Booklet), then get busy with the substantial image library and the paint and text tools within the program's tabbed workspace.

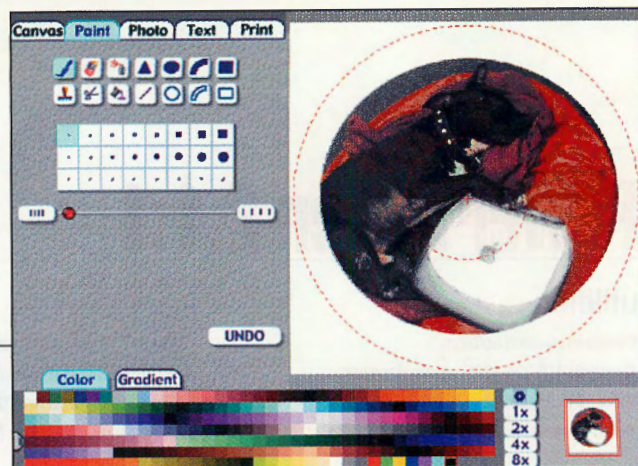
Pop-up help tags and a user-friendly interface make it easy to navigate and use Discus's layout tools. Just drag design elements to the label template, then adjust and modify them to suit your taste. Discus provides limited layering of design elements and lets you import your own graphics and photos.

Discus includes many handy touches such as a WYSIWYG font display, nice sound

effects, and arrow-shaped tools for easily nudging images exactly where you want them. Currently, you can't place more than 255 characters in a text box, but Magic Mouse says it's working to increase that number in a future version.

If you burn CDs (and these days, who doesn't?), Discus is the best software we've seen for labeling them.

—Steve Becker



**good news:** Easy and fun. Good feature set. Loads of templates and artwork. Inexpensive. **bad news:** Limited text-handling capabilities.



## Sheep

### fun & games

9

**Company:** Graphic Simulations

**Contact:** 972-386-7575, [www.graphsim.com](http://www.graphsim.com)

**Price:** \$34.95 (SRP)

**Requirements:** 233MHz Power Mac or faster, Mac OS 8.6-9.x, 64MB RAM, 100MB free hard disk space

There they go again, right into the fire. Oh well—where's the mint jelly?



Find a demo of Sheep on The Disc.

Much as we try, we can't rate Sheep without indulging in at least one gratuitous ba-a-a-a-d pun. The game is, as you might guess, about sheep—herding sheep. It's about herding incredibly stupid sheep, in fact. And we're not being mean: The manual mentions—even celebrates—their stupidity.

How dumb are the sheep? Well, they're smart enough to avoid the herder (you), yet dumb enough to charge boldly into harm's (death's) way—the big, ugly, and loud kind of harm, such as flame-throwing turrets, barking robotic pit bulls, and fiery comets.

Playing one of four herders (including the pseudo-anime BoPeep), your job is to escort

suicidal sheep through seven worlds, each with four levels. Of the four breeds (Pastoral, Factorial, LongWool, and NeoGenetic), some are easier to herd than others. For example, the LongWools generally stick together as a flock (like the human longhair-biker stereotype they're based on). Regardless of what breed you're herding, your success depends more on dumb luck than on any improvement in your herding skills.

The only nonrandom aspect of the game is picking which breed to herd through which level, as you're required to use all four breeds (one per level) in each world. Naturally, power-ups are scattered throughout the game—pick up the radio,

for example, and the sheep will follow you around a hazard instead of heading directly into it.

We appreciate a good puzzler as much as the next guy, but Sheep isn't really a puzzler: It's more like shooting fish in a barrel, only you're trying to protect the fish. Sheep generally annoyed us, but you might like it if you're a glutton—mutton?—for punishment.—Niko Coucouvanis

**good news:** Cute story. Generally smooth gameplay. You can pick up and toss the sheep.

**bad news:** Cute only goes so far when you're herding dumb sheep.





# Stylus Photo 820

## hardware

**Company:** Epson America

**Contact:** 800-463-7766, [www.epson.com](http://www.epson.com)

**Price:** \$129 (SRP)

**Requirements:** Mac OS 8.6 or later, 64MB RAM, USB port, 400MB free hard disk space recommended

**A**s if we weren't already delighted with the exceptional price and quality of Epson's current line of photo printers, the company has gone and added a new option: the Stylus Photo 820. The 820 outshines its competition (including other Stylus Photo models) with great output quality, speed, and value—plus it works with Mac OS X.

The Photo 820 uses six dye-based inks (CMYK, plus light magenta and light cyan) on every image it prints, regardless of how you set the print quality. Not all six-color printers can say the same. And that ink comes in Epson's Intellidige cartridges, so you can remove and replace individual inkwells without confusing the printer's ink-level display.

Epson also uses Micro Piezo printing technology, which utilizes electromechanical pressure, rather than heat, to pump out ink. This allows consistently sized ink droplets to emerge from the respective nozzles built



PHOTOGRAPH BY W. B. JONES

**The Stylus Photo 820 is cheap, easy to use, and a good performer—three of our favorite qualities.**

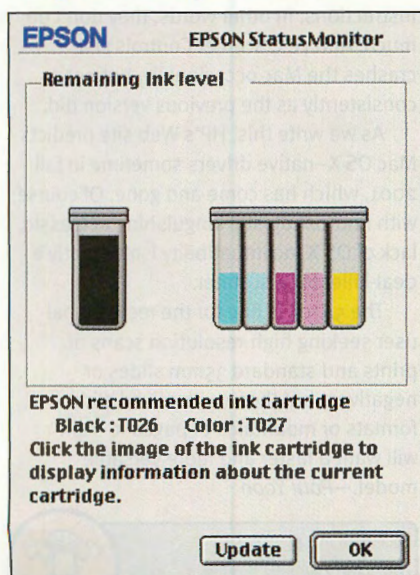
into each cartridge. The three variable-sized nozzles shoot droplets as small as 4 picoliters, resulting in exceptionally smooth gradations. Skin tones look marvelous. It's virtually impossible to discern any "dot," as you can with halftone images from a printing press. The results are extremely photolike.

The Photo 820 accommodates cut sheets of paper up to 8.5 by 44 inches (no roll-paper printing) and prints borderless images at 4 by 6, 5 by 7, 8 by 10, and 8.5 by 11 inches. When printing borderless images, the 820 issues a warning that the quality along the border might not be as high as that in the rest of the image. In our tests, borderless prints looked excellent and any reduction in quality was indiscernible—they just took a little longer to print. But it's well worth the wait, and quicker than manually cropping down the image. It took 2.5 minutes to print a borderless 5-by-7-inch image in Photo mode. A full 8.5-by-11-inch borderless image in the same mode took 7 minutes to print. The text printing is competitively sharp, with print speeds up to 12 ppm in Normal mode.

The Photo 820 uses Epson's new Print Image Matching (PIM) Technology. Working much as Color Sync profiles do, PIM translates digital-camera images to the printer in such a way that it prints a close approximation of what the camera actually saw. The Nikon Coolpix 995, Sony Cyber-Shot S75, and Minolta Dimage 7 are several cameras also incorporating PIM Technology. When shooting in automatic or a programmed mode, the camera stores additional print-setting data with each image. This data helps the printer better replicate an image's sharpness, color balance, contrast, and other settings.

The Stylus Photo 820 ships with Epson Software's Film Factory, ArcSoft's PhotoImpression 3.0, and Qbeo's PhotoGenetics 2.0 trial edition, but that's just gravy. The 820's price, ease of use, output quality, and OS X support seal the deal.—Leigh Webber

**good news:** Six-color printing. Stunning photo quality. Borderless prints.  
**bad news:** Printing width limited to 8.5 inches.



**Epson's printers keep getting smarter—the 820 shows you how much ink is left, not how much should be left.**

## High-Tech Paper

**E**pson's latest addition to its specialty-paper line, the new ColorLife Photo Paper, is a digital printer's dream—a top-grade photo paper with a soft satin finish. Its quality rivals that of the paper high-end photo finishers use. Light resistant and archive quality, it is a wise choice for printing the best-quality images. Keep in mind, however, that once you print an image, it needs to dry for 24 hours before you stack or frame it. Epson also recommends putting a sheet of absorbent paper between prints when storing them. The payoff? Epson claims photos printed on ColorLife paper can last up to 25 years.



# HP Scanjet 5470c

## hardware

9

**Company:** Hewlett-Packard

**Contact:** 800-752-0900, [www.hp.com](http://www.hp.com)

**Price:** \$351 (SRP)

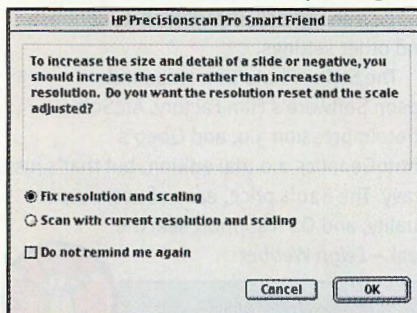
**Requirements:** Power Mac, Mac OS 8.6–9.x, 32MB RAM, USB port



PHOTOGRAPH BY W. B. JONES

**H**ewlett-Packard's Scanjet family has earned its reputation as a solid line of scanners, but we've had issues with HP drivers (which seem to prefer crashing our Mac to scanning our documents and images) and HP's incomprehensible transparency adapters. Happily, the 5470c's updated software is more stable than earlier versions, and positioning the new transparency adapter is refreshingly intuitive.

The new version of HP PrecisionScan Pro (3.1.1) is less prone to color casts and crashing than the previous one, but it still tends to crash when importing large files directly into Photoshop (via the plug-in). The bundled software includes the HP Scanjet Copy Utility, HP Share-to-Web, Corel Print Office 2000, ACDSee, PhotoPrinter Pro, and Faxstf 6. With the exception of the Share-to-Web software (basically a nudge to



**You can ask Smart Friend to keep its advice to itself—and it complies, unlike some of our friends.**

**It's not quite two scanners in one, but the 5470c sports a second scanning sensor.**

sign up with one of five photo-sharing Web sites), it's a solid if unspectacular bundle.

While scanning speeds are fairly quick, scanning at higher resolutions was considerably slower: For 300-, 600-, 1,200-, and 2,400-dpi scans of the same single frame, we got times of 0:28, 1:26, 2:46, and 6:11, respectively. It's nice to think a FireWire interface would have helped here, but the problem appears to be a hardware limitation rather than a lack of bandwidth—and 2,400 is a lot of dots per inch.

The XPA (transparency adapter) ensemble has notches, diagrams, and arrows indicating how it fits together, in an attempt to idiot-proof the scanning of slides and negatives (curiously, though, we had to flip our negative scans horizontally, even after following the cryptic directions on the adapter). The plastic plate in which the XPA sits even has convenient clips to hold the slide and negative templates when you're not using them. If you're planning on scanning anything other than 35mm film, though, you're out of luck. HP didn't include templates for more-esoteric slide formats (2 1/4, 110, and so on). This move probably won't bother 99 percent of the printer's

users, but it neglects those of us who work in medium formats or archive old (really old) negatives.

The HP Scanjet Controls control panel allows you to configure the five main buttons on the scanner's front (one each for scanning, scan-to-Web, photo reprinting, emailing, and copying). In theory, at the push of a button you could scan the document, then send the scan to the designated application, be it your preferred email program, text editor, photo-sharing Web site, or what have you. In practice, the buttons start up the scanning software, much as if you had double-clicked its icon; the program then dutifully waits for further instructions. In other words, they don't do much. And yes, Scanjet Controls still crashes the Mac occasionally, but not as consistently as the previous version did.

As we write this, HP's Web site predicts Mac OS X–native drivers sometime in fall 2001, which has come and gone. Of course, with Photoshop still languishing in Classic, lack of OS X incompatibility isn't exactly a deal-killer for a scanner.

The 5470c is fine for the recreational user seeking high-resolution scans of prints and standard 35mm slides or negatives, but those with mixed slide formats or mountains of pages to scan will want a faster and more versatile model. —Paul Yoon

## One Scanner, Two Sensors

**T**he 5470c captures scans via one of two different CCDs (charge-coupled devices—the integrated image-capture circuits in scanners and digital cameras), depending on which resolution you select for the scan. A linear sensor handles scans up to 600 dpi, and a staggered pixel array sensor handles higher resolutions, up to the 5470c's maximum 2,400 dpi. This provides for speedier scanning at lower resolutions and more detail in high-resolution scans. We found that higher-resolution output generally looked better, even after we lowered the scanned image's resolution in Photoshop.

**good news:** New version of software. 2,400-dpi resolution. Transparency adapter. **bad news:** No OS X support. Software is still finicky. Limited slide-format options.





# Swift 3D 2

## multimedia

**Company:** Electric Rain

**Contact:** 888-613-1500 or 303-543-8230, [www.erain.com](http://www.erain.com)

**Price:** \$159 (SRP)

**Requirements:** Power Mac, Mac OS 8.1–9.x, 96MB RAM, 20MB free hard disk space

In these days of tricked-out Web sites with all manner of animated gewgaws, how do you make your site stand out? Well, aside from reading *3D on the Web* on p37 of this issue, you get Swift 3D, a fun and useful program that brings 3D modeling and animation to the vector graphics crowd (think Flash). But Swift 3D is more than a simple Flash 3D converter; version 2 brings, among other tools, new Lathe and Extrusion editors, nonlinear scaling, morphing colors, and a timesaving Preview/Export feature.

Much as we liked the original Swift 3D, it had some serious limitations: Creating a cone, sphere, or cylinder was a one-click operation, but creating a box—the most basic of all the 3D building blocks—required extruding a 2D square. Those days are over: Swift 3D now features primitives for spheres, cones, tori, polyhedrons, pyramids, cylinders, planes, and boxes. With these basic building blocks, you can create rough models for almost anything in the real world.

Also new to the mix are the Extrusion and Lathe editors, which you can use to create organic models of all shapes and sizes. Simply sketch the outline of a shape and Swift 3D 2 extrapolates it into a full 3D model. This is a great improvement over the original, which did not include any way to create organic shapes.

One of V.2's most gratifying new features is the Preview and Export environment, where you can see exactly how your models will render—without sacrificing oodles of time to rendering. This new feature is great for experimenting with Swift 3D's seven new rendering styles (such as Cartoon Single Color Fills and Mesh Gradient Shading). You can also add shadows and specular highlights to your final render, though beware of lengthy render times.

Swift 3D 2 is impressive, but some of the original version's glitches remain—most notably, the clunky editing controls. The

**Swift 3D 2 brings advanced 3D-modeling tools to the low-bandwidth vector-graphics crowd.**

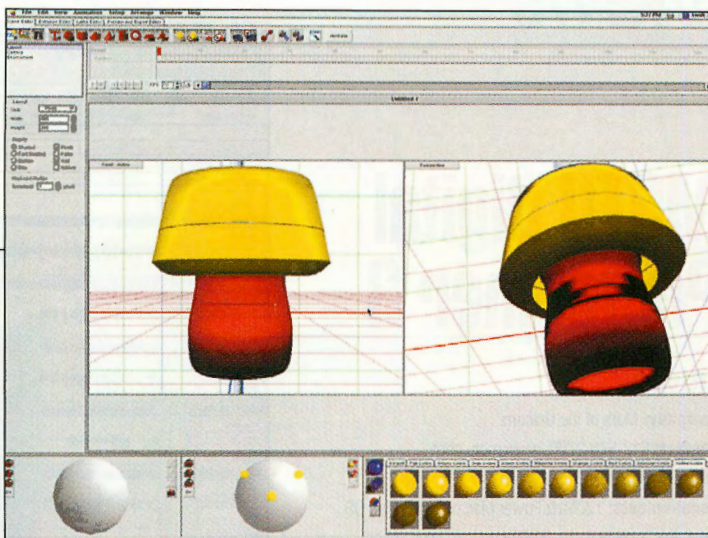
Scaling tool in particular is very tricky to work with—we often found ourselves making a shape larger when we wanted to make it smaller and vice versa. Version 2 also lacks any new 3D import features, so you can still only import models in the 3D Studio Max format—a bummer if you don't have 3D Studio Max.

Despite its few shortcomings, Swift 3D 2 is a huge advance over the original and

includes so many new and improved features that it feels like a whole new program. Plain and simple, this package is an absolute must-have for any serious Flash designer.

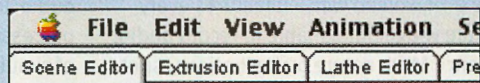
—Patrick Baggatta

**good news:** Versatile modeling tools.  
Great Flash rendering.  
**bad news:** Limited import capabilities.  
Squirrely controls.

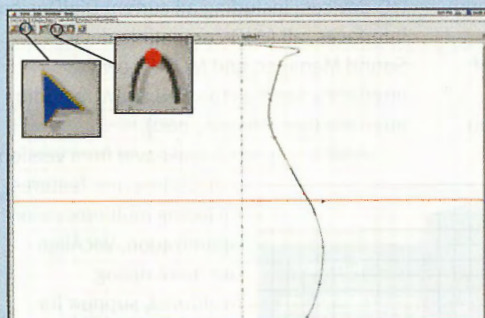


## C'mon, Baby, Light My Lamp

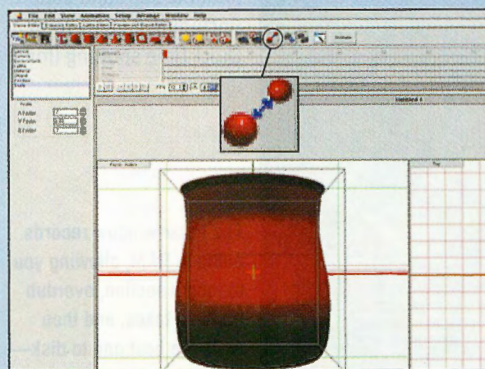
The Lathe Editor is Swift 3D's new tool for creating organic models. Here's how to build the lamp at the top of this page.



**1** Begin with an empty scene. Click the Lathe Editor tab at the top of the screen.



**2** Using the curve point tool (the curved arc with a point on top), draw an outline for the base of your lamp by adding a series of curve points (use the dotted line as the middle of your base). When you've drawn roughly the shape you want, use the shape tool (the blue arrow) to smooth out the edges at each point.



**3** Click back to the Scene Editor, and you will see the full shape of your lamp base. Edit the dimensions with the scale tool if you want to make adjustments. Next, go back to the Lathe Editor and use the same techniques to create the lampshade.



# MOTU Digital Performer 3

## audio

**Company:** Mark of the Unicorn

**Contact:** 617-576-2760, [www.motu.com](http://www.motu.com)

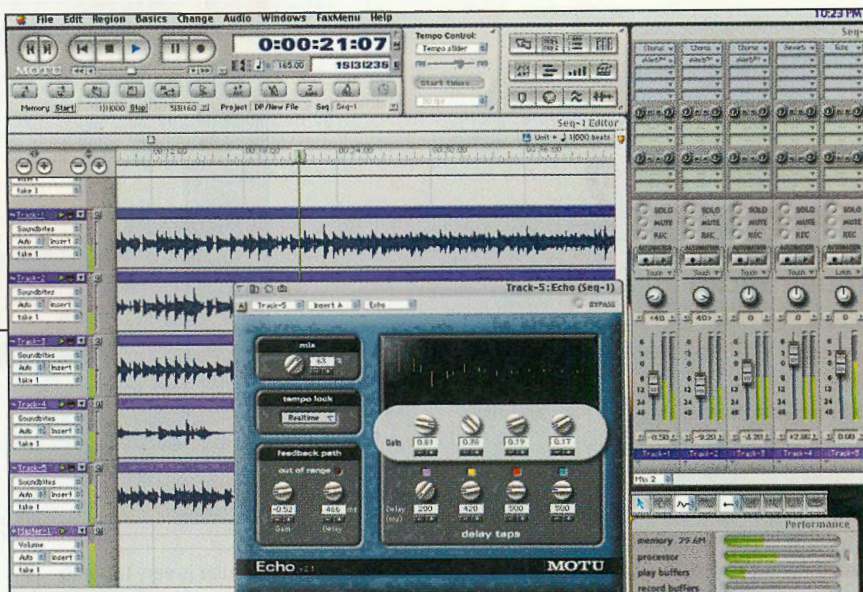
**Price:** \$795 (SRP)

**Requirements:** 120MHz Power Mac or faster, Mac OS 8.5.1-9.x, 128MB RAM, 30MB free hard drive space (for software installation), CD-ROM drive

**Recommended:** G3 or faster, Mac OS 9.x, 256MB RAM, 20GB hard drive space, PCI or FireWire audio input

When it comes to multitrack recording, we've fiddled with them all: 4-track Porta Ones, 24-track 2-inch reels, and ADAT hardware; and Master Tracks, Deck, and Cubase software. For producing professional, commercial-quality work, MOTU's Digital Performer 3 is one of the most intensive, full-fledged audio-recording and -sequencing packages we've ever worked with—it features every software widget imaginable to record audio, sequence MIDI, notate orchestrations, spot to movies, mix Dolby 5.1 surround-sound audio, and more. It's not as pretty or easy to use as Cubase, and some of the audio effects aren't as intuitive as their real-world hardware counterparts, but Digital Performer 3's sophistication rivals that of most software recording packages.

Digital Performer 3 has everything you need to take an audio project from



**On the surface, Digital Performer looks like recording-studio hardware, but underneath you'll find plenty of secret weapons no studio can touch.**

recording infancy to the final mastering process, including 24-bit, 96kHz audio; over 50 real-time effects; a waveform editor; a notator; complete automation; SMPTE time-code support; and complete mastering tools (such as surround-sound mixing). It's enough to make any hard-core audio geek cry with joy, though some tools may be superfluous for MIDI-centric users. With audio and MIDI tracks, only your Mac's processor speed and RAM limit the number of simultaneous tracks you can work with (see "Tune-a Mac," p60, for tips on prepping your Mac prior to recording). Digital Performer also supports most audio I/O devices, including all current DigiDesign interfaces, all ASIO-compatible devices, Sound Manager, and MOTU's own interfaces, such as the 828 FireWire audio interface (see *Reviews*, p60).

Version 3 sports a makeover from version

2 and some new features, including multiprocessor optimization, VocAlign (for quick dialog overdubs), support for multiple surround sound (including 5.1 and 10.2), QuickTime spotting (for

scoring QuickTime movies), Pro Tools import and export, and audio-CD importing. It also offers 14 new plug-ins, including tools that simulate vintage plate reverbs, convert audio to MIDI trigger pulses, gate in real-time, generate surround-sound delays, and master surround bass.

Though the un-Mac-like interface takes time to dissect, we like its modularity, which let us customize our onscreen workspace. You can call up any number of windows at the push of a button (including a Tracks Overview window, Sequence Editor, Graphic Editor, Drum Editor, QuickScribe Editor, and Mixing Board), or create sets that launch only the windows you want.

We recorded audio, with no noticeable latency, via the 828 on a 400MHz G4 with 192MB of RAM. Without a piano, we created an authentic-sounding piano accompaniment in the QuickScribe Editor (using QuickTime Musical Instruments), though inputting the final notes as a string of sixteenth notes became frustrating when Digital Performer kept stacking the arpeggio notes into intervals. The Mixing Board made us feel more at home, and we liked the automation, which put an end to our screw-ups during live mix-downs.

Digital Performer lets you resculpt audio and MIDI tracks like Silly Putty, so you can fix practically anything, even after recording. You can do everyday edits—cropping out noise, nudging audio tracks, and adding effects (reverb, echo, delay, chorus, gate, EQ, preamp, and more). And you can perform seemingly impossible feats of audio wizardry, such as bringing an off-key singer back on key, time-crunching a song to a specific length without affecting pitch,



**The Polar window records audio to RAM, allowing you to loop a section, overdub multiple takes, and then write the best one to disk—great for guitar solos.**



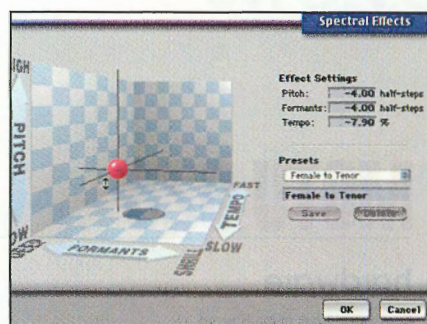
and banishing an instrument's dissonant harmonic overtones. We easily pushed a stray note back on the beat and drew a volume curve to fade out a guitar track right before its screeching feedback kicked in.

Our favorite feature, PureDSP Pitch Shift, let us record our voice track in a comfortable register and then easily transpose it up a couple of keys to fake a remarkable vocal range convincingly. The track retained the same tempo and length, and we sounded like ourselves—not like some giddy chipmunk—after the transposition. We also used the Pitch Shift feature to wrangle a few flat notes and pull them up to pitch (not easy), and the results impressed us: The edit was virtually transparent on playback. Also great is the Scale Time function, which compressed our 34-second clip to exactly 30 seconds without affecting pitch—invaluable for radio and TV ad work where audio must fit an exact time slot.

The graphical tools (such as pencil, reshape, scrub, and loop) let you magnify the guts of any audio wave and hack away at the most minute details—just don't get

carried away by the visuals and ignore your ears. The pencil tool helped us make tiny volume cuts to notch out string noise in our guitar track, but our attempt to satisfactorily draw in volume swells on an orchestrated string track took three times longer than if we had done it the old-fashioned way (via the Mixing Board's fader).

We have a few quibbles with Digital Performer. Dialing up effects with the onscreen controls is incredibly awkward. For example, when we grabbed a Delay knob with our cursor to crank up the milliseconds as we would in the real world (or in Cubase), the knob started to turn clockwise and then abruptly scampered off in the opposite direction. Clicking the knob and dragging our cursor skyward increased the delay, while dragging southward decreased it. With numerical fields, when we clicked and dragged to the right, the values increased, but when we dragged to the left, the number surprisingly increased further. Sure, we can type in the exact values, but damn it, where's the fun in that? Also, though Digital Performer includes many wonderful effects



**Talk about versatility! Spectral Effects can generate varying voices from one voice; we easily created a mixed-gender choir from a single vocal track.**

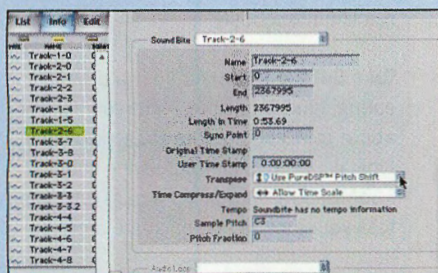
plug-ins, it doesn't support the hugely popular VST plug-in format.

All in all, Digital Performer 3 is like a musical magic wand that lets you create virtually flawless and rich-sounding audio projects that are as simple or complex as you choose. Whether you're an industry pro looking to go digital, an audio-tweaking freak, or a less-than-stellar musician in need of a secret weapon, DP3 is simply amazing.

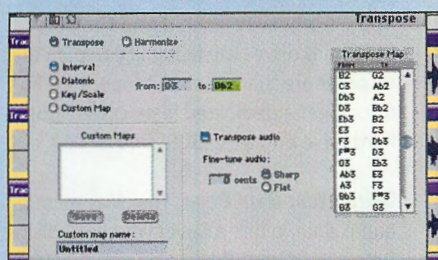
—Kris Fong

## Go Mariah

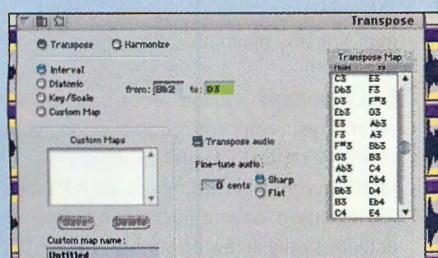
**D**igital Performer's PureDSP Pitch Shift feature lets you easily transpose your vocal track to different keys without altering its character, allowing you to fake a range of four octaves or more. Here's how to shift a vocal track up two keys to fake a higher range.



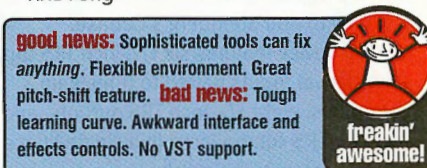
**1** Record all of your background tracks. When finished, go to the Windows menu and select Soundbites. In the Sound Bite section, select Use PureDSP Pitch Shift from the Transpose drop-down menu in each track, then close the window. Highlight all of the tracks in the Tracks window.



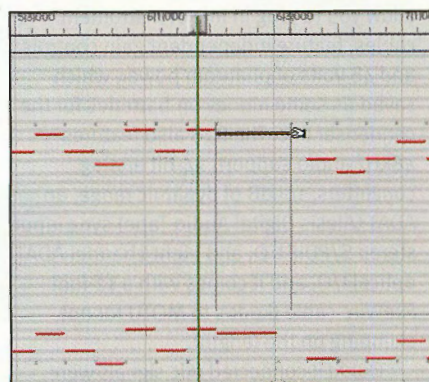
**2** Under the Region menu, select Transpose. In the Transpose window, type in your current song key in the field next to From. In the field next to To, type in a key two intervals lower, then click Apply. DP will lower the key of all tracks without altering the tempo or song length.



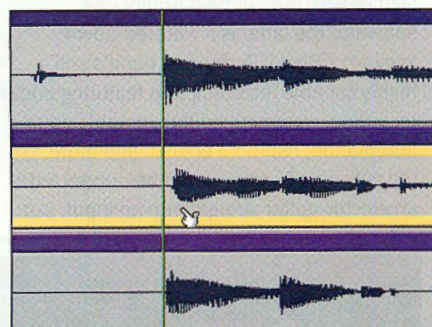
**3** Record-enable a new track and overdub your vocals. When finished, select all of the tracks in the Tracks window, then select Transpose again. In the From field, type in the key you just transposed to. In the To field, type in the song's original key, click Apply, and say hello to your newfound vocal prowess.



**good news:** Sophisticated tools can fix anything. Flexible environment. Great pitch-shift feature. **bad news:** Tough learning curve. Awkward interface and effects controls. No VST support.



**We increased note lengths in this MIDI track by simply grabbing a note's end and stretching it.**



**The Nudge feature allows you to move notes around. Here, we're nudging a slowpoke guitar track to start precisely with the others.**



## MOTU 828

### hardware

**Company:** Mark of the Unicorn  
**Contact:** 617-576-2760, [www.motu.com](http://www.motu.com)  
**Price:** \$795 (SRP)  
**Requirements:** 300MHz G3 or faster, Mac OS 8.6–9.x, 64MB RAM (128MB recommended), FireWire port, FireWire Enabler and Support 2.4 or later

**I** Mac, iBook, and TiBook users rejoice! Hard disk audio recording has arrived for systems that lack PCI slots. MOTU's brilliant 828 FireWire audio interface brings the sound input from mics, instruments, and other digital devices into your Mac using any Sound Manager-, MAS-, or ASIO-compatible recording app, including MOTU's Digital Performer (see *Reviews*, this issue, p58) and Steinberg's Cubase.

The device features six 1/4-inch TRS (tip, ring, sleeve) inputs paired to three gain controllers, eight 1/4-inch TRS outputs, and two XLR/TRS combo jacks in a single-space rack-mount unit. The combo jacks, which allow you to plug in mic or instrument cables, feature independent gain controls and 48 volts of phantom power, which saved us some money on batteries for the condenser mic. The 828 also features 48kHz audio support, 24-bit analog converters, 105dB of dynamic range, an ADAT (Alesis Digital Audio Tape) sync input, stereo S/PDIF I/O, and eight-channel ADAT optical I/O, and it comes with a 12-foot FireWire cable (kudos to MOTU for not skimping on the length).

Our XLR-connected mic signals were strong and noise-free, resulting in clean audio tracks when we routed and recorded signals with the bundled AudioDesk software. The latter is a watered-down version of Digital Performer, but it's still a highly capable recording app featuring audio recording, waveform editing, graphic editing, automation, real-time effects, and more. We did get some buzzing when we connected an electric guitar straight into an input, but

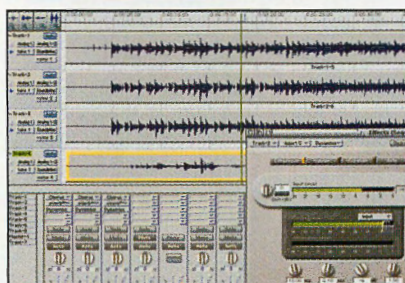
FireWire and audio, together at last—and the 828 is worth the wait.

this might be attributable to our aging guitar's well-worn pickup circuitry.

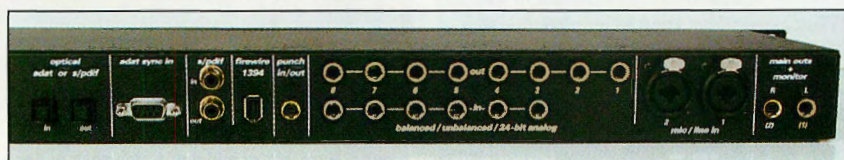
The CueMix Plus monitoring (stereo and headphone outs) is invaluable for overdubbing—it mixes the device's analog input with the Mac's software playback, allowing you to monitor playback without delay as you record. We also like the punch input, which let us hook up a stomp pedal and trigger punch-ins with our feet, freeing up our hands to overdub guitar parts. And, as owners of multiple ADATs, we love the ADAT sync feature; with AudioDesk, we could finally automate a mix-down and produce a hard disk master from our slaved ADAT chain, instead of having to do the mix-down live using our 24-track console.

The only thing lacking is a MIDI input, but the 828's I/O offerings, clean output, and software bundle make it a great hard disk audio-recording package and a welcome partner in crime for our PCI-less iBook.—*Kris Fong*

**good news:** Combo inputs with built-in phantom power. No-latency monitoring. Great hard disk recording bridge for ADAT. No PCI slot required.  
**bad news:** No MIDI support.



The included AudioDesk turns your Mac into a mixing studio.



Pick a port, any port...the 828 gives you plenty to choose from.

## Tune-a Mac

**Y**ou've decided to kick your 4-track to the curb and buy a snazzy hard disk recording package. But wait—why is your Mac crashing? Why can you only get four audio tracks? Why is your playback sluggish? Before you start recording, follow these guidelines to get your Mac set up correctly:

**Buy RAM** Minimum RAM requirements for recording packages aren't high for MIDI, but audio apps don't play nice with Virtual Memory—disable it and stock up on memory. It's cheap. Buy at least 256MB more. The more RAM you have, the more effects and tracks you can run simultaneously.

**Take Out the Trash** Audio is a drive-eating, gluttonous pig. A stereo track eats about 10MB per minute at 44.1kHz. A typical 24-track, 4-minute song gobbles 480MB. Sort through your hard drive and toss your junk to free up some room.

**Get a Fast SCSI Hard Drive** Despite Apple's proclivity for USB and FireWire, SCSI hard drives are faster. If you plan to record more than 16 simultaneous audio tracks, get a dedicated fast-access SCSI hard drive and a PCI SCSI card.

**Defrag Your Hard Drive** Your Mac records audio data in bits all over your hard disk. Defrag your hard drive to ensure that your Mac can access data instantaneously, avoiding any playback lollygagging.

**Quit Your Apps** You are serious about your recordings, aren't you? Stop checking your email! Get those Internet sports scores later! Give your recording app your Mac's full attention, or your background apps' activities may screw up your best take.



# Coolpix 885

## hardware

**Company:** Nikon

**Contact:** 800-645-6687, [www.nikonusa.com](http://www.nikonusa.com)

**Price:** \$549.99 (street)

**Requirements:** G3 or faster, Mac OS 8.6 or later, onboard USB

**F**or a few weeks, we forgot we were bespectacled editors and pretended we were Ansel Adams. That's the power of the Nikon Coolpix 885. This 3.21-megapixel camera takes stunning pictures, whether you're delving into its myriad of features or relying on its point-and-shoot simplicity.

At slightly over 8 ounces (without the battery and CompactFlash card), the Coolpix 885 fits snugly in one hand. The rotating Mode Dial at the top of the camera and the multidirectional menu selector at the back provide easy access to the camera's rich feature set. If we have any complaint, it's that the deeply nested menus and submenus take a little time to navigate through. Still, it's easy to see where you're navigating on the 885's crisp 1.5-inch TFT LCD.

The beginner will find the 885 easy to use. A two-way button offers quick access to the 3X optical zoom and the digital zoom, which in combination can magnify up to 4X. The camera's macro mode, which can focus on objects as close as 1.6 inches, takes sharp pictures without requiring a tripod. The Coolpix comes with iView's mediaPro media-management software for organizing

**Whether you're Ansel Adams or Grizzly Adams, you'll take great shots with the Nikon Coolpix 885.**



PHOTOGRAPH BY W. B. JONES

your pictures and converting them to different file formats. The mediaPro software works in Mac OS X, as does the CoolPix, thanks to OS X's Image Capture application.

So how are the pictures? Even in the fully automatic mode, foreground subjects popped, color remained true to the original, and we saw little to no color cast in most natural-light situations. Perhaps our favorite feature for the beginning hobbyist is Scene mode, which contains 12 unique settings for portraits, indoor parties, night shots, beach shots, landscapes, sunsets, fireworks, no-flash shots in museums, and other challenging lighting situations. (See "A Few of Our Favorite Scenes," below, for more information.)

Most Scene-mode settings worked well, producing superior results to the fully Auto mode. The one notable exception is Copy mode, intended for photographing information from whiteboards, office documents, business cards, and the like. We could rarely get close enough to capture text clearly, and colored documents came out blurry.

While high-end hobbyists might find the Coolpix 885's aperture range of f-2.8 to f-4.9 limiting, the camera is fully manual and offers sophisticated features like White

Balance bracketing. White Balance permits you to take a difficult-to-shoot image at three to five different settings (from bluish to reddish) and choose the one you want. In addition, the camera's noise-reduction feature removes artifacts in shots taken with long exposures.

Battery life on the Coolpix 885 is phenomenal. Once we popped in the included nonrechargeable Lilon battery, it was weeks before we needed a new one. Curiously, the Coolpix comes with the recharger but no rechargeable battery, so you have to buy the latter. And as is annoyingly common on digital cameras, you have to purchase an AC adapter separately as well.

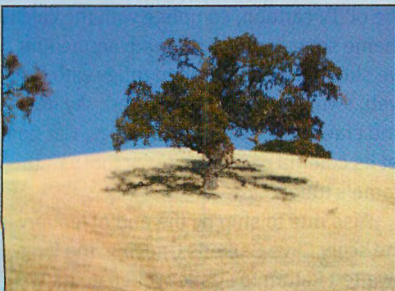
Nikon's Coolpix 885 has a wide range of automatic and manual features for serious photography enthusiasts looking to grow into their hobby. The few minor battery and menu-navigation annoyances pale in comparison to the great pictures you'll take.—Narasu Rebbapragada

**good news:** Great image quality. Great hardware design. Useful preset modes. **bad news:** No AC adapter included. Copy mode sucks. Interface is a little too nested.



## A Few of Our Favorite Scenes

**T**he Scene mode on the Nikon Coolpix 885 adjusts the camera settings to meet specific lighting situations, so you look like a better photographer than you really are.



**Landscape** Enhances the outlines and colors of objects.



**Sunset** Brings out the reds in sunrises and sunsets.

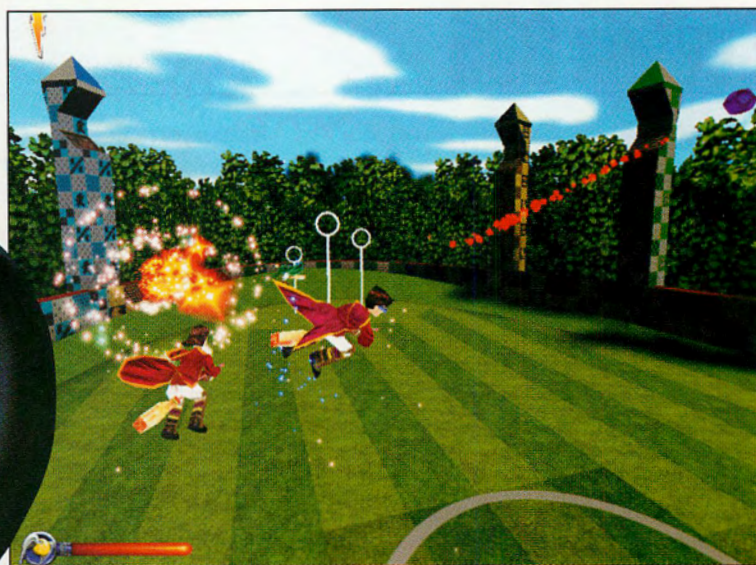


**Close Up** Sharpens objects in the foreground while blurring the background.



# powerplay

Who's coming to the Mac? You-Know-Who...



Harry Potter competes in Quidditch (and contemplates a baseball field-mowing internship).

## Aspyr Blasts Out of the Blocks

*Potter Bewitches the Brood*

**W**hile we're still recovering from our loopy New Year's hangover, the game gurus at Aspyr have already made some serious strides toward winning the race for brownie points. They not only announced a healthy dose of new game titles for the Mac in 2002, but promised to deliver them *all* in the first quarter. Some may even be available by the time you read this.

The biggest news: Aspyr is bringing Harry Potter and company to the Mac, thanks to Electronic Arts and Mac-port expert Westlake Interactive. Before the spectacled lad could even charm our pants off in theaters, Aspyr ever so gallantly laid a first-playable copy of the forthcoming Harry Potter and the Sorcerer's Stone in our eager hands. Our thoughts so far? Whether or not you're fascinated with all things Harry, the game is enchanting, addictive, packed with variety, and a lot of fun.

Though it's less wickedly sinister than American McGee's *Alice* (and rightfully so), Harry Potter invokes the same type of dark magical feel in this third-person, 3D action-adventure game. You assume Harry's role as you explore the cavernous Hogwarts School of Witchcraft and Wizardry, studying magic, playing Quidditch, and learning to ride a broomstick as you solve puzzles, interact with your cohorts, and do a little

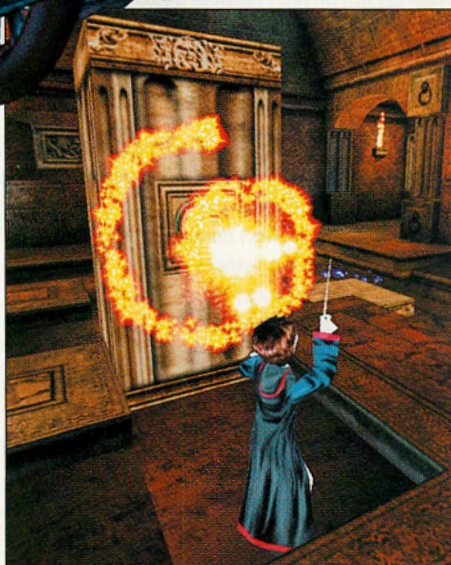
spell-casting—fu on the evildoers and You-Know-Who.

Our first playable version had no sound or music, and some of the environments (as well as Harry's goggled face) were incomplete at press time, but many of the finished areas are rich in texture, with stunning graphics, and the gameplay is looking great. The puzzles are engaging and fit the storyline well. We can't wait to get our hands on the final copy!

Aspyr is crossing its fingers, hoping to have Harry ready to go by January's Macworld Expo. Though it hasn't been set in stone, the game is expected to retail for \$29.95 and run natively on both Mac OS 9.x and OS 10.1.

And that ain't it from Aspyr. *Otto Matic* and *Spider-Man* should also be in stores by the time you read this. Spidey reminds us of the ol' TV cartoon, complete with the catchy theme song. In this action-adventure title, we shot overtosteronized thugs with our web, swung across the New York skyline, and crawled up walls and ceilings. But don't let its colorful cartoon exterior fool ya—this game's tough.

Also due to ship by the end of January is the scary Clive Barker's *Undying*, the long-awaited *Return to Castle Wolfenstein*, and the game that gets the prize for the most provocative and eyebrow-raising title, *The Sims*: *Hot Date*.—*Kris Fong*



There's no place like home...especially in Harry Potter's world.



Spidey nails 'em where it counts.



## SCREENSHOT OF THE MONTH

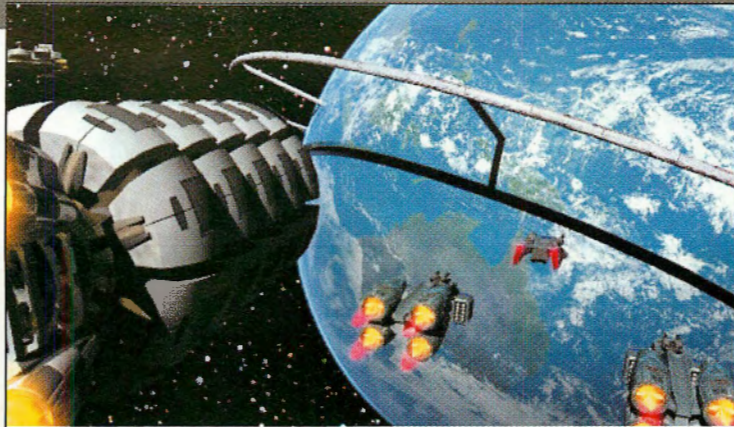
We christen this the Camera Grind...



### Artist's Statement

This sequence shows just how dangerous being a cameraman in Tony Hawk's Pro Skater 2 can be. Having been a sponsored skater "back in the day" (13 years ago), I can attest that a skater riding up on the camera does indeed happen quite often.—Clif Duhn

Send your best screenshots to [letters@macaddict.com](mailto:letters@macaddict.com) with the subject line "Screenshot of the Month" if you crave fame and glory (or at least fleeting satisfaction upon seeing your screenshot in a magazine).



EV Nova features an expansive universe. Could this be Disney's monorail planet?

## Ambrosia Pop-Pops a Rising Nova

*Translation: Three New Games!*

**A**t any given Macworld Expo, it's not uncommon to see the developers and publishers of commercial Mac games dwarfed by ominous game-character cutouts and flanked by a dizzying array of monitors, flashing the latest and greatest stuff to awestruck attendees. But some of the greatest stuff doesn't get lauded in a pricey show booth. Some of the greatest stuff—namely the work of shareware developers—you'll find solely on the Web. One of the best in the field is shareware maven Ambrosia Software ([www.ambrosiasw.com](http://www.ambrosiasw.com)), which is releasing three exciting new games for Mac devotees: Deimos Rising, EV Nova, and pop-pop.

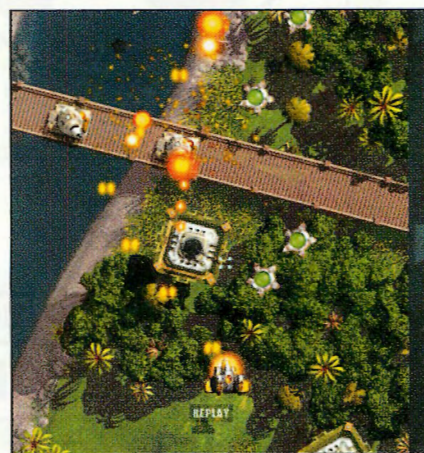
It's just like Ambrosia to release a game title that nobody knows how the heck to pronounce (Apeiron and Maelstrom, anybody?). Its latest Hooked-on-Phonics smacker, Deimos Rising, is a sequel to Mars Rising, a top-down ship shooter. The graphics are absolutely stunning, and it's a lot of fun to play. Mars fans will be happy to know that Deimos allows weapons upgrades, includes a two-player mode, and features some spectacular particle effects.

Escape Velocity fans also get a sequel with the forthcoming EV Nova, the third installment of the massively popular space-strategy series. Nova follows in the footsteps of game predecessors Escape Velocity and EV Override in terms of gameplay, but Ambrosia has rewritten the game engine—and it shows. The graphics and special effects blow away those of the two prior games. As EV veterans can tell you, you'd better log in some vacation time when this game hits; it's completely addictive.

Speaking of addictive, there's a new Breakout-style game in town, and it's called



Ambrosia's pop-pop puts out anime with an attitude.



Like a bird hovering over a freshly washed car, Deimos Rising has you unloading bombs on intended targets.

pop-pop. Don't roll your eyes at this one, especially since Ambrosia's at the development helm. Decidedly un-Ambrosia-like, pop-pop puts a lemon twist on Breakout and bursts (pun intended) with colorful anime graphics, a catchy techno-beat tune, and head-to-head multiplayer capabilities.

Deimos Rising should be downloadable by the time you read this, with EV Nova and pop-pop following shortly after in January or February.—Kris Fong and Andrew Tokuda



# how to

*It's a dog-eat-dog world—and we're seeing Spottz.*



Whether you're launching a multiple-employee company or freelancing solo, you can boost your business image with a snazzy logo.

## Design a Logo

by Leigh Webber



This stuff's for the pros.



It'll take some effort, but you can do it.



The fundamentals, if you will.



Find a Photoshop Elements tryout on The Disc.

A single image—a bitten apple, a swoosh, or a couple of golden arches—sums up the identity of certain gazillion-dollar companies. While Apple, Nike, and McDonald's may have millions of dollars to throw at right-brainers who crank out such highly recognizable logos for a living, your small-potatoes business may require that you exercise your own right brain if you're looking for a compelling way to stamp your company name into the minds of millions.

Whether you're a one-person freelance firm or a 100-employee upstart, success requires a good amount of promoting and networking. Rather than press the flesh with a generic, type-only business card, you can raise the image of your company—no matter how small—by branding its name with a logo.

What type of logo you choose to create is a personal decision—keep in mind that you can design one in a number of ways. Here, we show you how to design a logo using three different design techniques: typographic, graphic, and photographic. We also throw in ten factors to consider before designing your logo, and tell you where you can get cool fonts to use in your designs—free. We used Adobe's Photoshop Elements (see “The Right Elements,” p65), but feel free to use any comparable image- and graphic-editing program.

### In This Section

**p65 The One-Minute Logo** If you can't afford the time to make a logo or are feeling creatively exhausted, Photoshop Elements features a handy tool to help you create a logo in a minute or less.

**p66 Give Logos the Text Treatment** Times and Geneva are fine fonts for body text, but not for adding intrigue to a logo. If you desire a text-driven logo, find out how to add flair to type that goes beyond simply making the perfect font choice.

**p68 Illustrate Your Identity** A compelling graphic has more impact than a typed company name. Learn how to express your company's identity by creating a graphic representation for its logo.

**p70 Create a Photo Logo** If you believe a picture is worth a thousand words, a photographic logo can speak volumes to potential customers. Get the scoop on how to design a logo using photos.



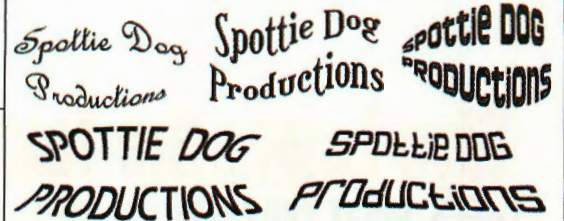
# The One-Minute Logo



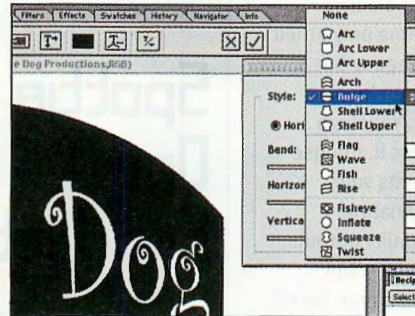
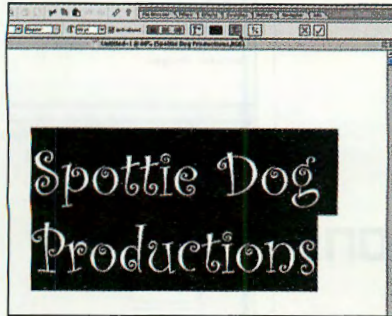
## WHAT YOU NEED

• Photoshop 6.0 or Photoshop Elements

If you're looking for a way to create a logo quickly, Photoshop Elements includes a number of text-warping tools that make the task a no-fuss affair—and one you can complete in about a minute.



Start with a font, mix in a text warp style, and bam, you've got a logo in less than a minute.



### 1 Type Your Text

Create a new Elements document, select the text tool, and type your company name using any desired font. Highlight all the text and then click the warp text icon (the T over the arc) in the text options bar.

### 2 Warp Your Text

In the dialog box, select any of the warp styles from the Style drop-down menu and view the changes instantly. If you're satisfied with how your logo looks, click OK and then admire your handiwork.

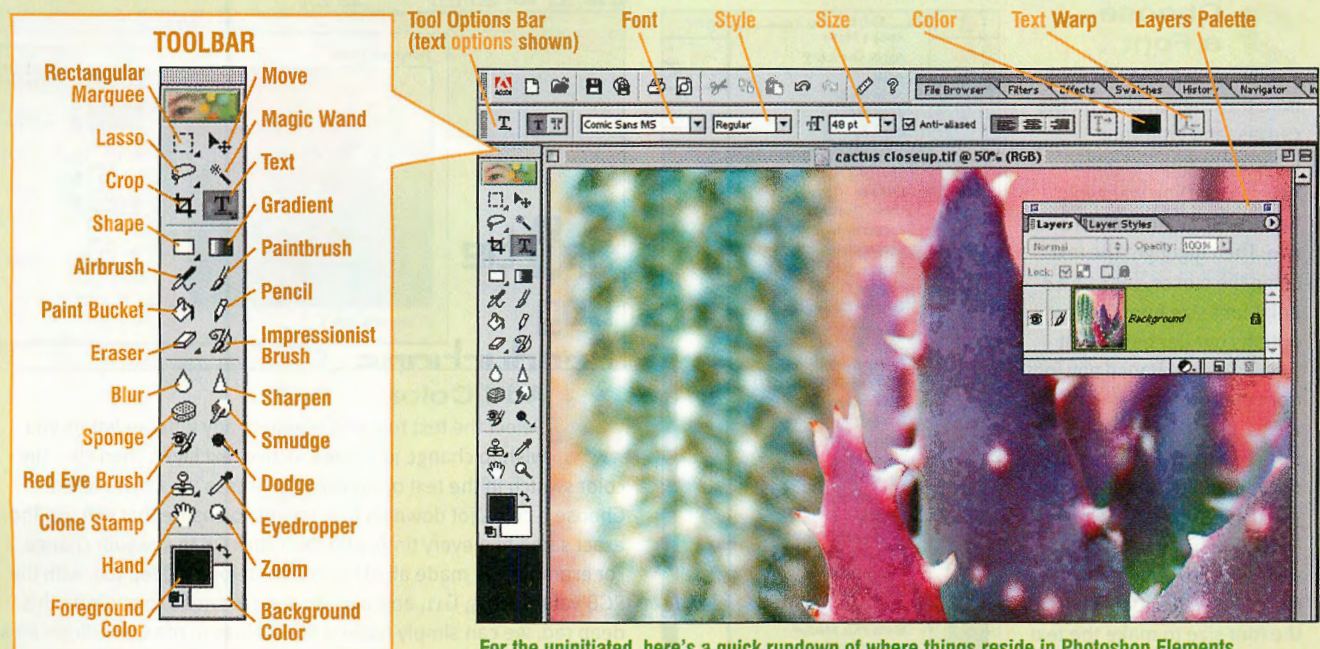
### 3 Distort It Further

You can further warp the text by adjusting any of the sliders—use Bend to control the curvature, Horizontal Distortion to tweak the warp along the horizontal axis, and Vertical Distortion to tweak the vertical warping. When you're satisfied, click OK.

## The Right Elements

Adobe Photoshop (\$609, [www.adobe.com](http://www.adobe.com)) is awesome, but pricey. Lemke Software's GraphicConverter (\$35, [www.lemkesoft.com](http://www.lemkesoft.com)) is dirt cheap, but lacks layer support and sophisticated design tools. So what's a budget-minded designer to do when he or she has photos that need retouching, graphics that need drawing, and type that requires implementing in a project? Get Adobe Photoshop Elements.

Priced at a mere \$99, Elements is a scaled-down version of Photoshop 6.0, but includes almost every core feature found in Photoshop—and then some. The program lacks a few of the more sophisticated tools such as the pen tool and CMYK support, but it features all the necessary items to create logos, including the ability to make selections, render bendable text, and edit vector-based graphics.



For the uninitiated, here's a quick rundown of where things reside in Photoshop Elements.



# Give Logos the Text Treatment



## WHAT YOU NEED

- Photoshop Elements (or comparable program)

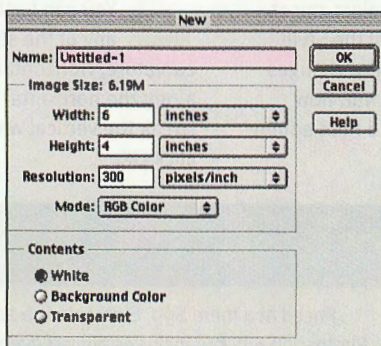
Text-driven logos can send strong messages with the right font and design implementation.

**C**oca-Cola, the World Wrestling Federation, and Calvin Klein have all made an impact on the world in name only—their logos consist of nothing but text. If your company has a simple or catchy name, consider designing a text-driven logo.

The two most important things are font and color. Your logo must be easy to read or the public may quickly dismiss it. Choose a font that is legible at any size and that best represents your business image—for example, showcasing your edgy nature, high-tech savvy, friendliness, hip artiness, or high-quality output. Choose colors that reproduce well onscreen and in print—and when printed in black and white. Here's how to create a type-based, two-color logo in Photoshop Elements.

## 1 Create a Canvas

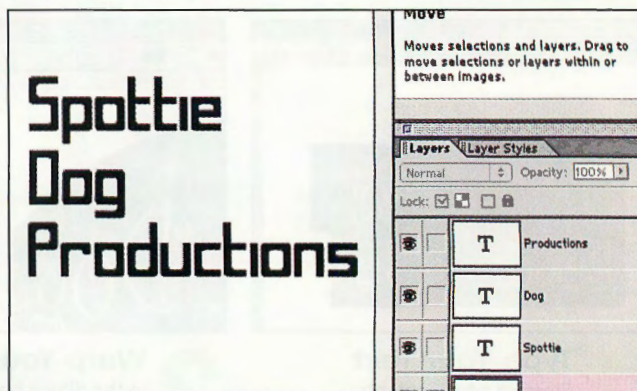
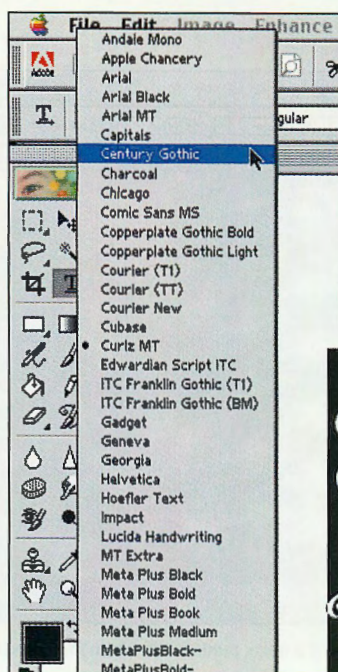
Launch Elements and create a new document by selecting New from the File menu. In the dialog box, set Resolution to 300 ppi (pixels per inch) for the best printer support, and select RGB Color from the Mode drop-down menu.



Then enter a proper Width and Height (in inches) to create a canvas large enough to encompass your logo if it were to be printed on a T-shirt (we chose 4 by 6 inches). Click OK.

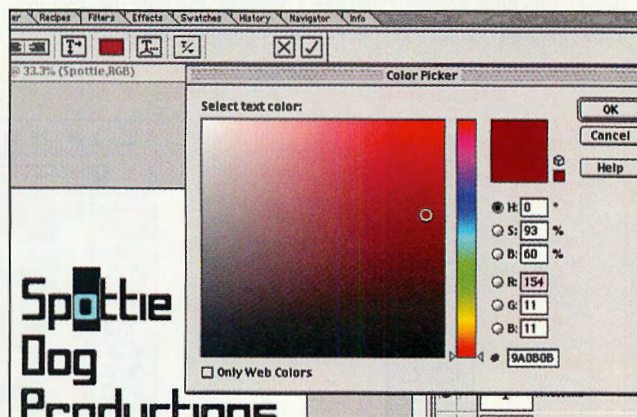
## 2 Choose a Font

Select the text tool from the toolbar, click on the canvas, and type your company name—use the Return key if you want your name to span more than one line. Then highlight the text using the cursor, select a 48-point font size from the text options bar (for better font viewing), and choose any font from the Font drop-down menu. If you don't like it, keep selecting fonts from the drop-down menu until you see one you *do* like (see "Get Free Fonts," p69, if you're not satisfied with your fonts). Once you've decided, change the font size to make the text almost fill your canvas.



## 3 Reposition Letters and/or Words

Elements doesn't contain proper kerning or leading tools, but you can change letterspacing (kerning) and the distance between lines of text (leading) using layers. To change letterspacing, type each letter in a separate layer by selecting the type tool and clicking in the canvas. Type a letter, click in the canvas twice in different areas, type the next letter, click in the canvas twice, and repeat this sequence for all remaining letters. Then use the move tool on each letter layer to position each character as desired. To alter the space between lines of text, enter each word in a separate layer and use the move tool to reposition the layers. For example, we typed *Spottie*, *Dog*, and *Productions* in separate layers, then moved each word independently.



## 4 Add Color

Select the text tool and highlight any letter or letters you wish to change in the respective text layer. Then click the color swatch in the text options bar to access the Color Picker. Choose a color, jot down its RGB values to ensure that you use the exact same hue every time, and then click OK to see your change. For example, we made all of the os in our logo a deep red, with the RGB values R154, G11, and B11. Anytime we need to replicate this deep red, we can simply type its RGB values in the Color Picker for a perfect match.



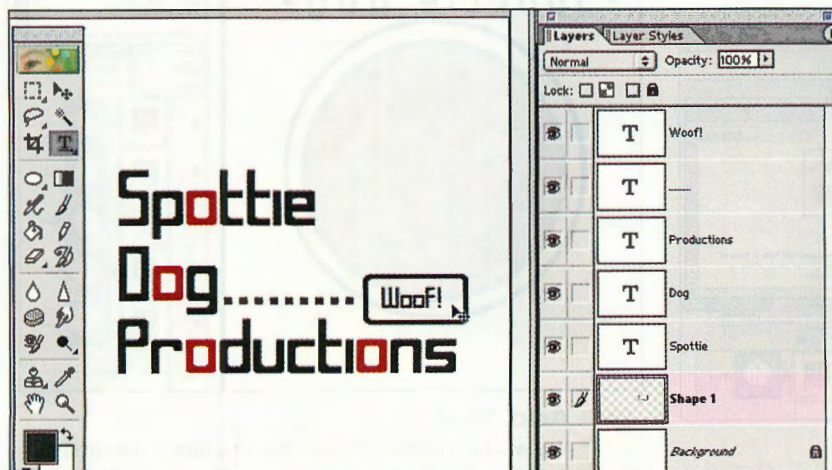
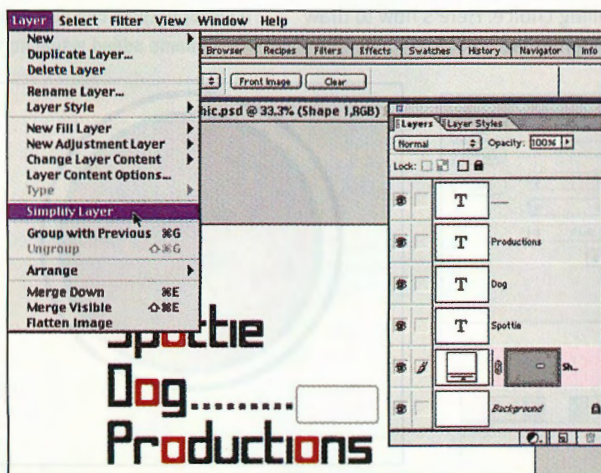
## 5 Add Graphic Text Elements

Dingbat fonts and text symbols can provide artistic accoutrements. Experiment by working with different characters and fonts in different sizes. We complemented our company name with a little wordplay by adding a stylized Woof! in our logo. To do this, select the text tool, click next to Dog on the canvas, and type bullet points (Option-8) to create a series of dots. Then use the move tool to position the bullets following the word Dog.



## 6 Create a Frame

To make Woof! stand out, we drew a rounded rectangular shape to frame the word. Select the rounded rectangle tool from the shape tool's drop-down menu in the toolbar, select white as the foreground color, and draw a rectangle. To resize it, select Transform Shape and then Free Transform Shape from the Image menu, grab any of the rectangle's four corners, and enlarge or shrink your box by dragging the corner outward or inward, respectively. Double-click in the box to confirm the change. Increase the rectangle border's thickness by clicking the layer shape icon on the rectangle layer in the Layers palette, then selecting Simplify Layer from the Layer menu. From the Edit menu, select Stroke. In the dialog box, set Stroke Width to 15 pixels, select black for Color, choose Outside for the Location, and click OK to make the change.



## 7 Add Embellishment Text

To complete the graphic, type a witty remark using the text tool—we typed *Woof!* Move this text layer to the top of the Layers palette, then use the move tool to place the type inside the rectangle—if you need to resize the rectangle, follow the scaling instructions in step 6. Then flatten the layers by selecting Flatten Image from the Layers menu, and save your spiffy new logo as a TIFF file.

## 10 Things to Consider When Designing Logos

**Think different** Research what others have done for ideas and inspiration, but put your own spin on a design. An effective logo sets itself apart from the rest by basking in its own uniqueness.

### KISS (Keep It Simple, Stupid)

Take some advice from Apple, Van Halen, and KISS (the band)—your logo will get a lot more mileage if a kid can easily scrawl it on a notebook or carve it into a desk.

**Make It Memorable** Use a strong image or design (like the simple graphics from Apple and Nike) that resonates with your clientele and sticks in their subconscious.

**Count Colors** Use browser-safe colors that translate easily from print to Web to avoid color discrepancies. Also keep in mind that it's more expensive to print a four-color logo than a two-color one.

**Fit the Font** If your logo includes text, use a font appropriate for the logo style. A logo of a teddy bear surrounded by blood-dripping type will cause most people to scratch their heads and say, "Hmmm..."

**Size Matters** Design your logo at the largest size you'll ever need. It's easy to scale down a logo, but very difficult to enlarge one effectively and flawlessly.

**Calculate Contrast** For added punch, promote high contrast in your graphic elements. A brightly colored font on a dark background screams, "Check me out!"

**Get Symbolic** If you want to get the point across that your company is the fastest in the business, don't choose a tortoise as your logo. Think about every potential symbolic meaning a graphic element may convey before settling on one.

**Versatility Is Key** Your logo helps promote your business, and placement opportunities—on Web sites, business cards, letterhead, T-shirts, mugs, or stickers—are important. Keep these diverse mediums in mind when designing.

**Just Trademark It** After you spend all this time designing your logo, you don't want someone else stealing it, do you? If you value your business, trademark your logo.



# Illustrate Your Identity



## WHAT YOU NEED

- Photoshop Elements (or comparable program)
- Drawing tablet (optional, but recommended)

**H**eadquarters honchos at Taco Bell, the Oakland Raiders, and Betty Crocker have chosen text and graphic combos to represent their corporate identities. Other companies, like Apple and Nike, possess logos so familiar that they've dropped the text and use graphics alone.

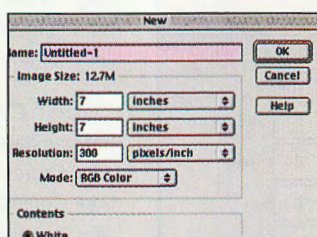
If your company name conjures up visions of some image that can dance in one's head, a graphic logo may be the most compelling choice. Here's how to draw our graphic-based Spottie Dog Productions logo in Elements.



A clever graphic can give your company name added visual impact.

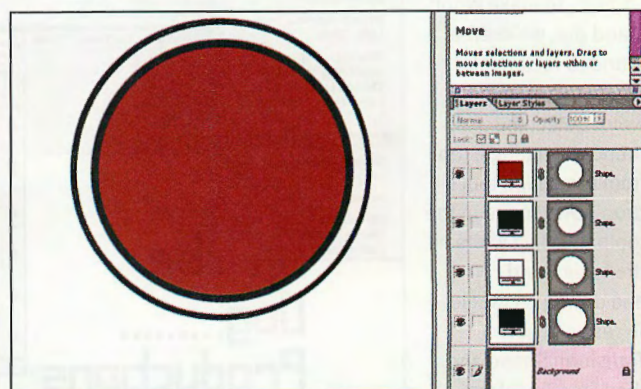
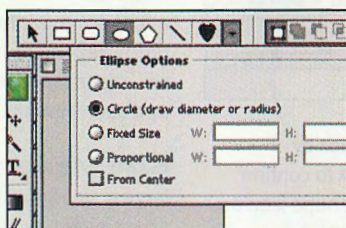
## 1 Create a Canvas

From the File menu, select New. In the dialog box, set up a 7-by-7-inch canvas with a 300-ppi resolution in RGB mode. Click OK to create the new document.



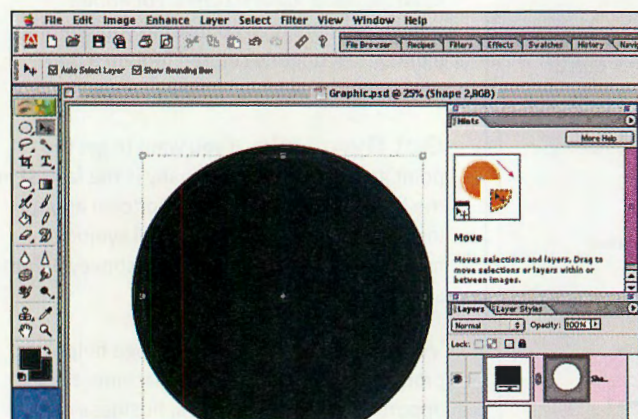
## 2 Select the Circle Tool

Select the ellipse tool from the shape tool's drop-down menu in the toolbar. In the shape options bar, click the upside-down triangle to open the Ellipse Options drop-down menu, then select Circle.



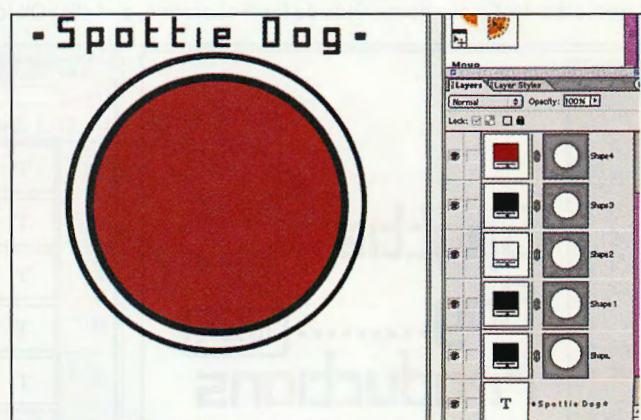
## 4 Create Concentric Circles

Draw three progressively smaller colored circles—white, black, and red—in a series so they form a concentric pattern. Use the move tool to align them perfectly within each other, forming a target image.



## 3 Draw a Circle

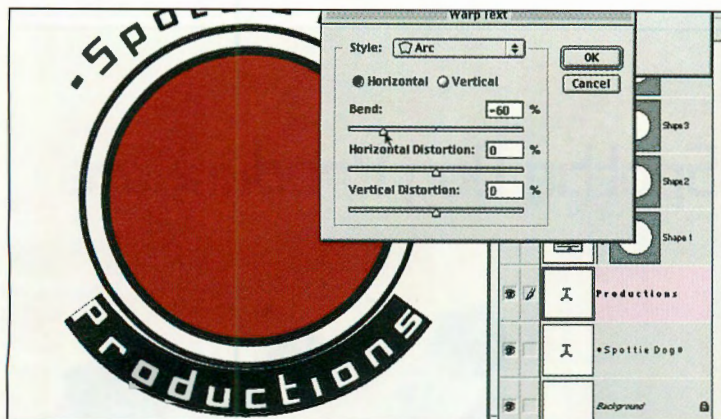
Select black as the foreground color and drag the cursor to draw a large black circle, leaving room on the outer perimeter for text. To resize the shape, from the Image menu select Transform Shape and then Free Transform Shape, hold down the Shift key, and drag any corner of the bounding box to change the scale. Double-click in the box to confirm the change, and then use the move tool to position the circle in the center of the canvas.



## 5 Add Text

You want the name to follow the curvature of the circles. Select the text tool, choose a font (we opted for SF Laundromatic), and set a preferred point size (we picked 48) in the text options bar. Click in the canvas and type •Spottie Dog• in one layer (use Option-8 to type the bullets). Because Elements doesn't support kerning, press the spacebar between each letter to elongate the text. Type Productions in another layer, placing a space between each letter to keep the look consistent.





## 6 Warp the Text

To curve the text, add a text warp—select the Spottie Dog layer, select the text tool, highlight the words •Spottie Dog•, and click the warp text icon. In the Warp Text dialog box, select Arc from the Style drop-down menu. Then adjust the Bend slider until the text flows along the outer circle's perimeter evenly (our text required 60 percent). Use the move tool to position the text at the top of the outer circle. Repeat with the Productions text layer, but set Bend to a negative number to inverse the arc (we set ours to -60 percent) and move it to the bottom of the outer circle.



## 7 Draw a Graphic

Next, place an illustration of our mascot, Spottie, within the circles—this may take some patience if your drawing skills aren't up to par. Under the Layer menu, select New, Layer to create a new layer—click OK in the resultant dialog box and move this layer to the top of the Layers palette. Select the paintbrush tool, choose black as the foreground color, and click the brush size icon (the square containing a dot over a number) in the paintbrush options bar to open the dialog box. Select a diameter anywhere from 25 to 35 pixels with Hardness set to 100 percent. Then draw Spottie (or some semblance of her), altering the brush diameter and roundness. Don't worry about haphazard lines—use the Undo command (Command-Z) or the eraser tool to get rid of mistakes.



## 8 Recolor the Graphic

For added contrast, make Spottie white. First flatten the layers by selecting Flatten Image from the Layers menu. Then select white as the foreground color, select the paint bucket tool, and click in any red portion of Spottie's head to turn it white. Click in her body to turn it white, too. Finally, save your new logo as a TIFF file.

## Get Free Fonts

Strapped for cash? These generous Web sites offer free fonts for the taking. While you can freely use these fonts in your personal projects, just remember to abide by each font author's licensing disclaimer if you're considering using them for commercial purposes.

**Cool Archive** ([www.coolarchive.com](http://www.coolarchive.com)) Lazy designers have this site bookmarked—it offers almost a thousand free fonts, along with free graphics and sound clips.

**Astigmatic One Eye Typographic Institute** ([www.astigmatic.com](http://www.astigmatic.com)) If you're looking for some unique fonts or distinctively edgy dingbat designs, check out this company's free collection.

**ParaType** ([www.paratype.com](http://www.paratype.com)) Worldly types will appreciate this site, which includes a wealth of well-designed fonts and hard-to-find multilingual fonts, including Russian, Greek, Farsi, German, and Latin.

**Abstract Fonts** ([www.abstractfonts.com](http://www.abstractfonts.com)) Though it can be somewhat difficult to navigate, this site hosts a huge archive of free fonts that range from elegant typefaces to truly bizarre styles. Have patience, and you'll prosper.

**Blue Vinyl Fonts** ([www.reflectdesign.com/bvfonts](http://www.reflectdesign.com/bvfonts)) While this company generally designs commercial fonts, it offers 40 free fonts, too. Find both TrueType and PostScript fonts and dingbats of the highest caliber.

**1001Fonts.com** ([www.1001fonts.com](http://www.1001fonts.com)) This easily navigable site features an abundance of TrueType and PostScript fonts divided into categories such as Brandname, Retro, Handwritten, and Top Rated.

**Larabie Fonts** ([www.larabiefonts.com](http://www.larabiefonts.com)) Ray Larabie's site offers a collection of over 400 original fonts, designed by the man himself and displayed in a quick, visual manner for easy perusal.

**Acid Fonts** ([www.acidfonts.com](http://www.acidfonts.com)) You'll find a collection of standard, retro, and techno-inspired fonts at this site, but once the site loads in your browser, the subsequent sprouting of multiple browser windows can be nerve-racking.

**Luc Devroye** (<http://cgm.cs.mcgill.ca/~luc/fonts.html>) Though this site ain't pretty, the insane number of links found here makes it the ultimate resource for just about every kind of font on the Web.

**3D Café** ([www.3Dcafe.com/asp/fonts.asp](http://www.3Dcafe.com/asp/fonts.asp)) Drop by this site and find a fantastic portal to an endless number of free fonts, games, plug-ins, and more.

**Chank Fonts** ([www.chank.com](http://www.chank.com)) Chank Diesel's artwork is famous. Take a look around and you'll see his commercial fonts plastered across Doritos bags, Apple Jacks boxes, Taco Bell wrappers, The-Artist-Formerly-Known-As-Prince albums, Welch's Grape Soda cans, and more. He's also a generous guy—you'll find a good assortment of high-quality free fonts on his pop-art Web site.



## Create a Photo Logo



### WHAT YOU NEED

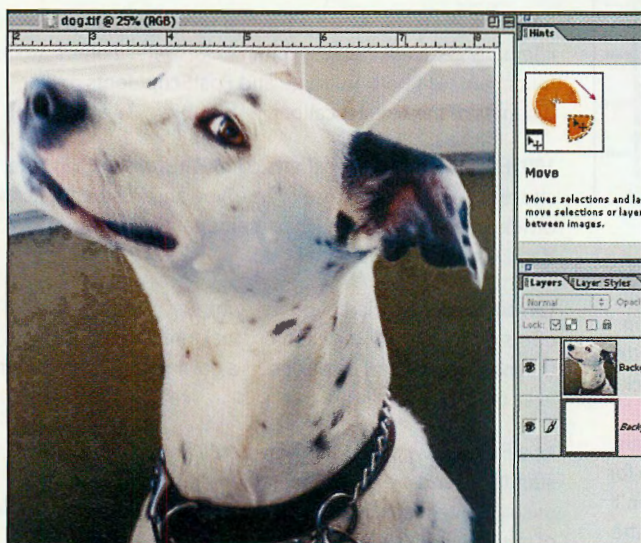
- Photoshop Elements (or comparable program)
- Two digital photos of significant objects—one main, one secondary

If your business is in design, fashion, or another visual medium, a photographic logo can relay a polished, professional image to potential clients. Bring images into Elements by scanning prints or downloading images from a digital camera.

To create a catchy photo-based logo with text and graphic elements, follow our instructions using your own photos—choose two photos of objects that relate to your business or your name.



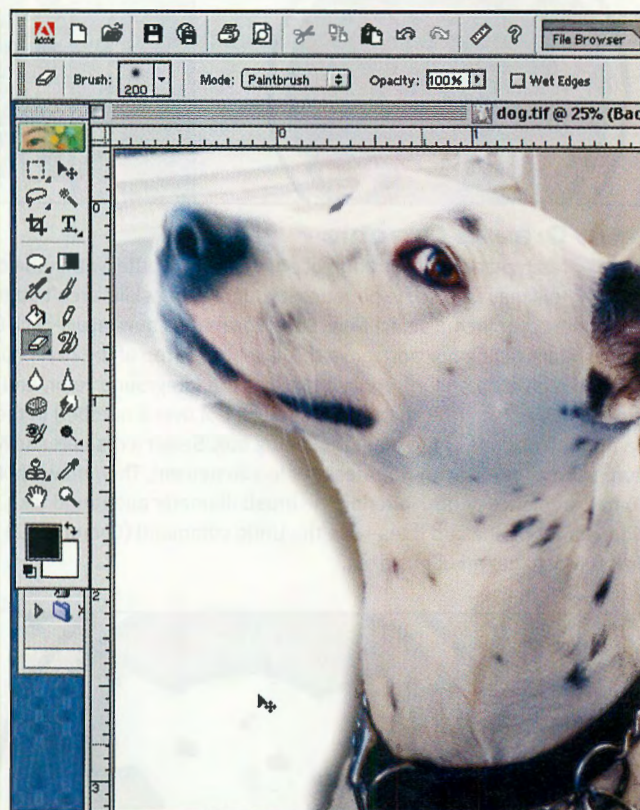
For a truly high-profile image, use photos to create a logo.



### 1 Create a Clean Backdrop

Before beginning, make sure that the two photos you've chosen to use (main and secondary) are of the highest quality. Each digital image should have enough resolution to fit your canvas without enlarging, which degrades the image due to the magnified pixel data. If you're scanning an image, scan at 300 dpi. If you're taking a digital photo, set the camera at its highest resolution (TIFF is the way to go if your camera supports the format).

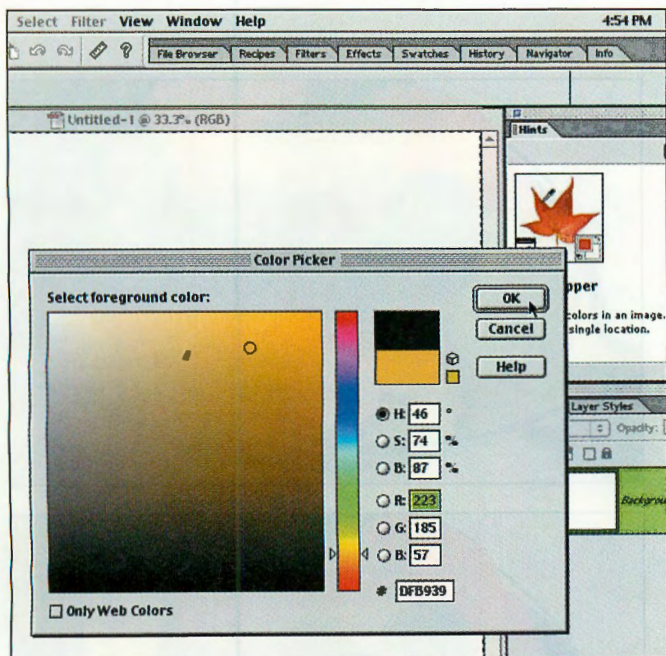
Open your main digital photo in Elements (we used a 300 dpi scan of Spottie smiling) and duplicate the image by dragging the Background layer onto the new layer icon (the dog-eared document) at the bottom of the Layers palette. Click in the Background layer, select all (Command-A), and then choose white as the foreground color in the tool palette. From the Edit menu, select Fill. In the resultant dialog box, click the Contents Use drop-down menu and select Foreground Color, then click OK to replace the Background layer with solid white.



### 2 Erase the Background

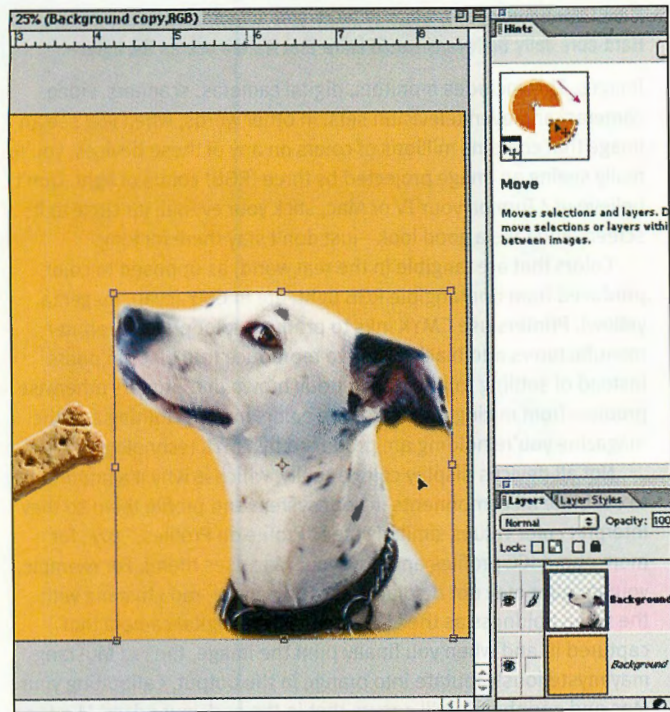
Select the eraser tool, set the brush size in the eraser options bar to 200 pixels, and begin erasing around your object (in our case, the dog). As you move closer to the object, zoom in and choose a smaller brush—say, 65 pixels or smaller—and brush out all the background detail until you see nothing but your object against a white backdrop. Save your image as a Photoshop (PSD) layered document. Repeat steps 1 and 2 with your secondary photo image.





### 3 Create a Graphic Backdrop

From the File menu, select New and create a 6.5-by-6.5-inch, 300-ppi document. Colorize the background by selecting all (Command-A). Then click the foreground color in the toolbar to open the Color Picker, choose any color (we chose a warm yellow), click OK, and select Fill from the Edit menu to fill the canvas with your color choice.



### 4 Add Your Photos

Open your main photo, select the object layer, and drag the layer onto the colored canvas file. Scale your object as needed: from the Image menu, select Transform, then Free Transform, and hold down the Shift key as you resize the image. Then use the move tool to place it wherever you like. Repeat with your secondary photo. Keep both of these image layers at the top of the Layers palette.



### 5 Add Text

Select the text tool and choose a color, font, and point size. Then click in the canvas and type your company name. (We used SF Laundromatic as our font, deep red as the color, and a 50-point size.) Use the move tool to place the text in the desired location. Move this layer to the top of the Layers palette.



### 6 Add Graphic Elements

Add punch to photo logos by including complementary graphics. To make the stripes in our logo, we created a new layer—from the Layer menu, select New, Layer. From the View menu, select Show Grid to aid in placement. Select the rectangular marquee tool and draw a thin vertical column on the left side of the canvas, spanning the entire height. Select a foreground color that's lighter than your backdrop color, select the paint bucket tool, and click in the rectangular selection to fill it with color. Then copy the selection (Command-C) and paste it into a new layer (Command-V) to create a second stripe. Use the move tool to place it to the right at an equal distance from the first stripe and down about 1/4 inch for variation. Continue pasting stripes (Command-V), moving each one so that they form a staggered striped pattern, until you reach the right side. Use the move tool to fine-tune their placement. Select the crop tool and select the entire canvas except for the 1/4-inch stripe overhangs, then double-click inside the selection to crop. Flatten the image, save your logo as a TIFF file, and show it off to the world.



## Keep Color Consistent from Pixel to Print

by Kris Fong



### WHAT YOU NEED

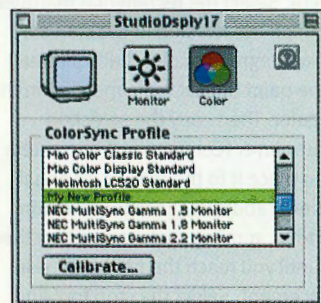
- Any Power Mac
- ColorSync (built into Mac OS 8.5 and later)
- Imaging peripherals (optional), such as scanners and printers

Sometimes it's obvious—skin tones shouldn't be green, polar bears don't come in blue, and Apple doesn't make a Lemon iMac. Other times it's not—just how red, orange, or pink is salmon anyway? When it comes to color, what you expect to see isn't always what you get in the final print. And even when colors look right onscreen or in print, the colors may not be entirely accurate. Color can shift when you snap a picture with your digital camera, manipulate the image on your Mac, and print out the photo on your printer—but it doesn't have to.

Since Mac OS 8.5, Apple has built ColorSync, an industry-standard color manager, into the Mac OS. ColorSync contains a set of tools that helps keep color consistent in a digital file as it travels between your Mac and its peripherals, making sure those pics of dear ol' dad don't come out looking like portraits of Papa Smurf when you print them. But like pots and pans in the hands of those who don't cook, ColorSync won't do you any good unless you know how to use it correctly.

That's where we come in. We'll show you how to keep the color in your photos and graphics looking as you intended, no matter what type of scanner, camera, or printer is hooked up to your Mac. You'll find out how to color-calibrate your monitor and create a profile, and how to implement the ICC (International Color Consortium) profiles of any imaging device with your Mac OS using ColorSync.

Our methods should satisfy the average Mac user—however, graphics pros working in color-critical situations should consider purchasing a full-fledged color-management package, such as GretagMacbeth ProfileMaker Pro (\$3,500, [www.gretagmacbeth.com](http://www.gretagmacbeth.com)) or one of the ColorVision ([www.colorcal.com](http://www.colorcal.com)) or ColorBlind (ITEC, [www.itec.net](http://www.itec.net)) packages, for absolute color accuracy.



Use ColorSync to calibrate your monitor and build a profile for system use.

### UNDERSTANDING COLOR

Before you can manage color, you need to understand how color appears on your various devices. Your Mac and its peripherals operate in one of two *color spaces* (a group of colors used to represent the full color spectrum)—either RGB or CMYK (see *Scrapbook*, Dec/01, p20). All image-capture and display devices use RGB (red, green, blue—primary colors) to produce



PHOTOGRAPHY BY KRIS FONG

It isn't always obvious—which of these pics displays the right colors? Hard-core Jelly Belly fans would know that it's the one on the bottom.

images. This includes monitors, digital cameras, scanners, video cameras, and even television sets. In other words, when you see an image that contains millions of colors on any of these devices, you're really seeing an image projected by three (RGB) colors of light. Don't believe us? Turn on your TV or Mac, stick your eyeball up close to its screen, and take a good look—just don't stay there for long.

Colors that are tangible in the real world, as opposed to color produced from nontangible RGB light, are in CMY (cyan, magenta, yellow). Printers use CMYK inks to produce color photos—printer manufacturers add black (K) ink to reproduce true black in prints instead of settling for the dark muddy brown that printers otherwise produce from mixing CMY inks. The colors in your clothing and the magazine you're holding are produced by CMYK technology.

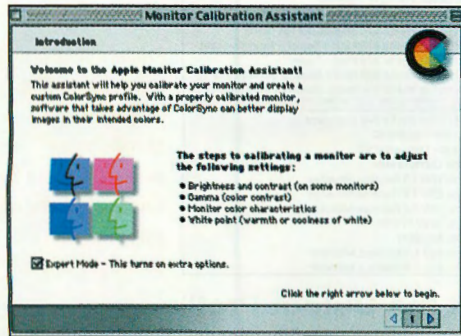
Not all devices display color equally, which is why it's important to calibrate all components in your system and profile them so they interpret color values similarly (see "Profile on Profiles," p74, for more about ICC profiles and how your Mac uses them). For example, your monitor may not display that candy-apple-red Mustang with the same boldness as the LCD screen of the digital camera that captured it, and when you finally print the image, the red Mustang may mysteriously mutate into orange in the output. Calibrating your Mac and peripherals will ensure that in the end your prized Mustang doesn't turn into a pumpkin at midnight.

Also important to note: Ambient room light and reflections affect images on your screen. Your best course of action is to work in a dark environment, away from overhead lights and windows. If that's not possible, consider buying a monitor hood to shield your monitor screen from glare (check out PhotoDon, a Web site that sells custom-size hoods, at [www.photodon.com](http://www.photodon.com)).



## CALIBRATE YOUR MONITOR

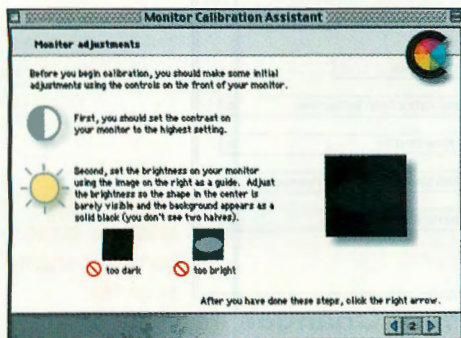
Color displayed on a monitor screen can shift over time. Make it a point to calibrate your monitor once a month, and more often if you work in publishing. Here's how to calibrate a monitor and save a profile with ColorSync.



Check the Expert Mode box for more calibration options.

### 1 Configure the Monitor Calibration Assistant

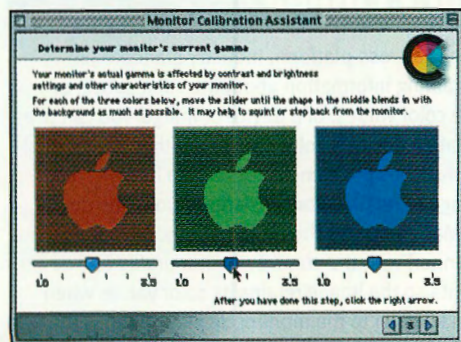
In Mac OS 9.x and earlier, under the Apple menu, select Control Panels, then Monitors to open the Monitors window. Mac OS X users: Select System Preferences from the Dock and click Displays. In all systems, click the Color button—in the window that appears, click Calibrate to open the Monitor Calibration Assistant window. Check the Expert Mode box and click the right arrow. Note: iBook or PowerBook users, jump ahead to step 3. LCD monitor users, jump to step 4.



Use your monitor's controls to turn the square black, with the oval barely visible.

### 2 Adjust the Brightness and Contrast

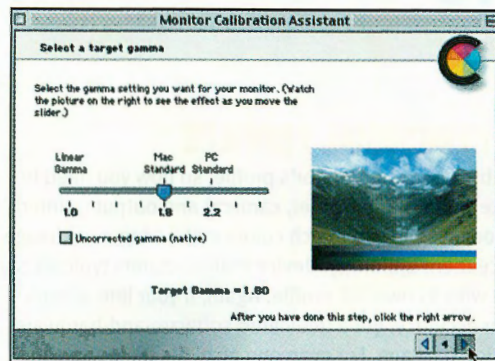
Using your monitor controls, turn the screen contrast to its highest setting—this sets your monitor to display a full range of tones, making blacks dark and whites bright. Then adjust your monitor's brightness control so the square pictured is solid black and the oval is barely visible. Click the right arrow when you're finished.



Adjust the sliders so that each apple blends into its background.

### 3 Adjust the Gamma

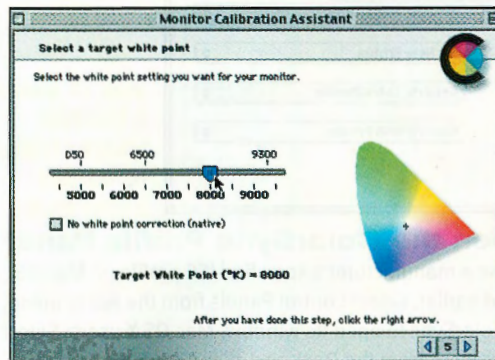
This keeps images from looking washed out. Starting with red, sit four feet from your monitor and adjust the slider so that the apple melts into its striped background. Repeat with the green and blue sliders. Then click the right arrow.



If you work in the Web industry (RGB), you can set the target gamma above 1.8 for richer color. If you work in print (CMYK), keep the gamma at the Mac-standard 1.8.

### 4 Set a Target Gamma

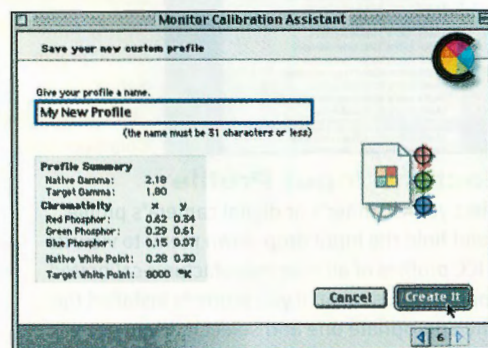
The next panel allows you to adjust a target gamma for your monitor. Macs have used a standard 1.8 setting for years—while this setting is normally the one most Mac folks use, you can change it. Setting the target gamma higher than 1.8 gives richer color. Setting it lower washes out color. It's absolutely fine to keep it set to the default 1.8. Click the right arrow to continue.



Adjust the white-point slider until the white on your monitor looks right to you.

### 5 Adjust the White Point

ColorSync allows you to adjust your monitor's white point anywhere between 4,500 and 9,500 degrees Kelvin, letting you customize how the color white appears in your display. Kelvin is a measurement used to gauge color temperature—daylight measures about 5,500 degrees Kelvin, and tungsten light (from most lightbulbs) measures about 3,200. Most Macs have a default 6,500-degree setting. Setting the temperature lower makes whites appear more orange on your monitor. Setting the temperature higher makes whites appear more blue-toned. Move the slider in either direction, using the white window background as a reference, until you're satisfied with the whiteness. Then click the right arrow.



Give your new profile a name. ColorSync will then use it to drive your monitor.

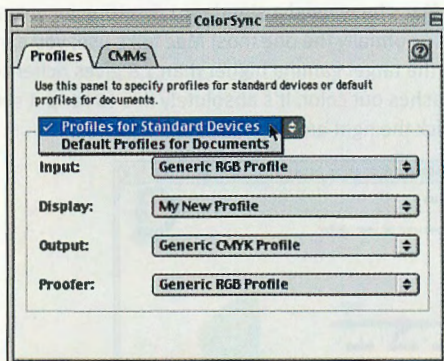
### 6 Create Your Profile

Type a name for your profile in the appropriate field. Click Create It to have ColorSync save your new profile, and your system will then use it to drive your monitor. You can change your monitor profile in the Monitors control panel at any time.



## SETTING PERIPHERAL PROFILES

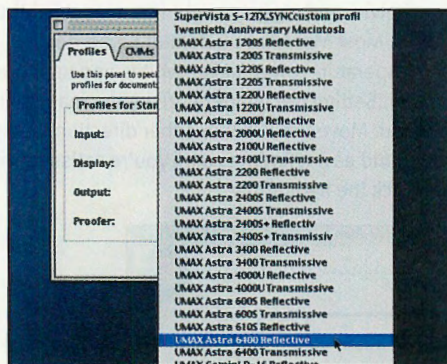
**Y**ou established your monitor's profile, so now you need to calibrate your input (scanner, camera) and output (printer) devices, so your system can match colors embedded in an image and reproduce them uniformly. Device manufacturers typically ship each product with its own ICC profile. Again, if your line of work relies on color accuracy, get a dedicated software-and-hardware color-calibration package. For everyone else, it's OK to use the manufacturer-provided ICC profile. Here's how to set up these types of profiles in ColorSync for system use.



To set ICC profiles in ColorSync, select the Profiles For Standard Devices menu.

### 1 Open the ColorSync Profile Panel

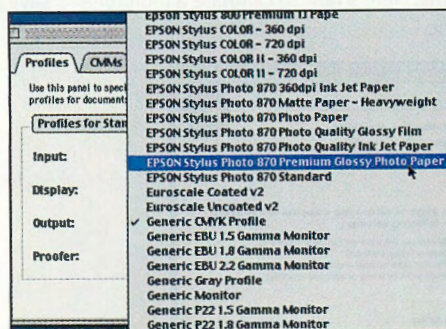
To use a manufacturer's specified ICC profile, in Mac OS 9 and earlier, select Control Panels from the Apple menu, then select ColorSync to open its window. Mac OS X users: Select System Preferences from the Dock and click ColorSync. In both systems, click the Profiles tab, then select Profiles For Standard Devices in the main drop-down menu. Under the Display profile, your newly created monitor profile will appear listed by name. Under the Input and Output selections, your Mac defaults to Generic RGB Profile and Generic CMYK Profile, respectively.



Your scanner's or digital camera's installer software usually comes with an ICC profile. Select the appropriate one for ColorSync input.

### 2 Select the Input Profile

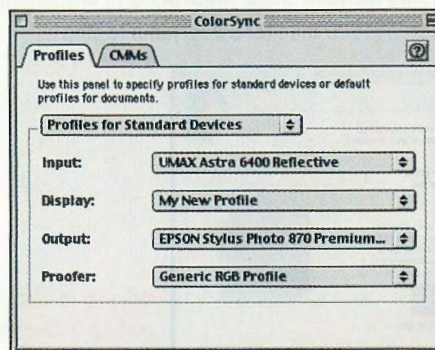
To select your scanner's or digital camera's profile, click and hold the Input drop-down menu to view its contents. The ICC profiles of all your manufacturer-calibrated devices will appear in this menu if you properly installed the drivers. Find the appropriate one and select it. If you use a scanner and a digital camera interchangeably to input images, make sure you change the Input profile accordingly to match the device you're currently using.



Printers often install individual profiles coupled with a specific paper medium. Choose the combination you're using for your ColorSync output.

### 3 Select the Output Profile

To select your printer's profile, click and hold the Output drop-down menu to view its contents. Depending on the type of printer you have, you may see a number of different profiles for your specific printer, each paired with a particular paper medium, such as heavyweight matte paper or glossy photo paper. Choose the profile that corresponds to the type of paper you want to print on—just remember to change the Output profile accordingly whenever you switch paper types.



Here are our profiles, which reflect the current peripherals attached to our Mac.

### 4 Save Your Changes

Finally, close the ColorSync window (click the window's upper-left corner square). This opens a dialog box, which asks if you want to save your changes. Click Save. That's it—your pics should no longer cause you any grief with unexpected and unwelcome color shifts.

## Profile on Profiles

**A**n ICC profile is a cross-platform, industry-standard file format containing information about the color space, or range of absolute color values, of a device or image. You can use a profile to translate a device's color data to another device so that the latter reproduces the same colors within its own color space. For an image to retain color consistency from one device to another, your Mac compares the profile of, say, an input device (like a scanner) with the current monitor profile and makes adjustments so the image retains its color values when it travels from the scanner to the monitor display. When you print out the image, your Mac compares the monitor profile with the current printer profile and compensates for any color discrepancies, ensuring that the printed photo matches the original scan in coloring.

Kris Fong was disappointed when after profiling her bank account, she saw nothing but red.



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WINTER 2001

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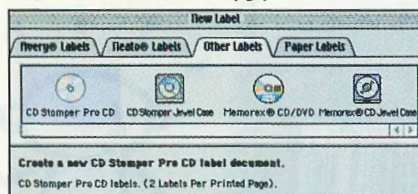
Find Streamripper 1.0.5, BeMailer 4.1.1, and demos of Label Printer Pro 6 and eFuse 1.5.1 on The Disc.

**Q** My CD burner gets quite a workout creating all of my CD compilations, and my poor Sharpie works even harder, as I use it to write out the names of the songs contained on each CD. Rather than force myself to decipher my own shoddy chicken-scratch, can I use a Mac app to make and print CD labels?

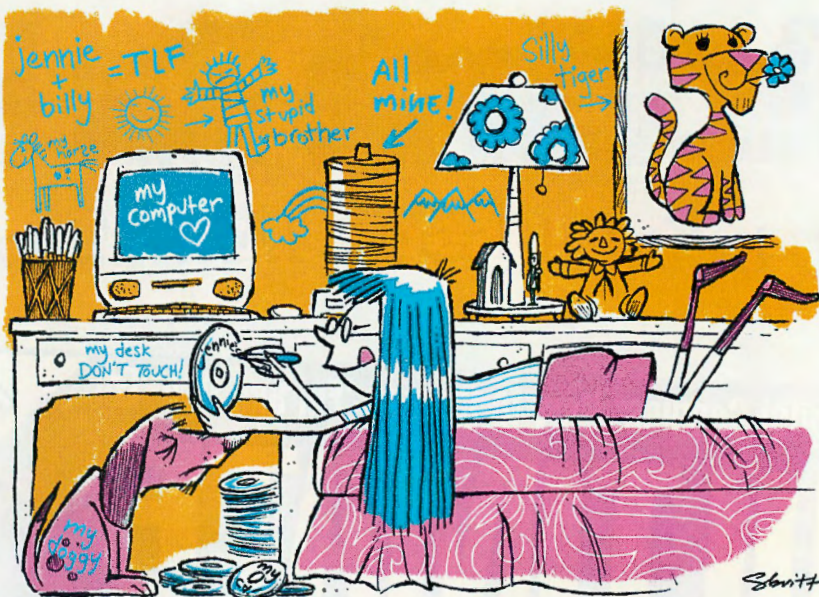
**A** Give your poor Sharpie a rest! One of the most popular CD-labeling kits is CD Stomper Pro (\$39.99, [www.cdstomper.com](http://www.cdstomper.com)). This package includes software for designing and printing CD and DVD labels, special stickers on which to print your designs, and a little hardware gizmo that helps you stick labels onto CDs perfectly. Unfortunately, the included software is not perfect, and you have to use CD Stomper's own labels.

A better-rounded software package for creating CD labels is Label Printer Pro from Pay and Play Software (\$29.95, [www.payandplaysoftware.com](http://www.payandplaysoftware.com)), which allows you to create CD disc labels, as well as labels for jewel cases, spines, business cards, and more. Plus, it is compatible with both Mac OS 9 and Mac OS X and comes with templates for just about every type of label paper (including products from Avery, Memorex, Neato, and CD Stomper). It doesn't come with a handy-dandy hardware gizmo, but you can stick the labels on straight if you concentrate—and hold off on the coffee.

You might also want to check out Discus CD, which we review on p54 of this issue.



**Label Printer Pro lets you design and print custom CD labels, and it supports a bevy of available label papers.**



Jennie breaks in her new Sharpie before giving Rex the Blue Dalmatian treatment.

**Q** My boss insists on creating and sending bulk emails for all of our clients and contacts. Is there a mass-email program available for the Mac?

**A** While most people consider it spam, others see bulk email as a bonafide marketing tool. Though we hate spam as much as anyone, we can vouch for the latter use—among the tons of bulk email we receive daily, we sometimes discover little-known Mac companies and products.

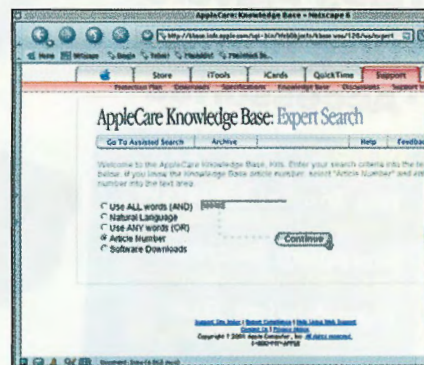
As for mass-mailing Mac apps, three products come to mind: MondoMail/FM Plug-in, BeMailer, and eFuse. MondoMail/FM Plug-in from Acme Technologies (\$69, [www.acmetech.com](http://www.acmetech.com)) is a FileMaker plug-in that allows you to send batch mailings from your FileMaker database, Web database, and other sources, and it includes templates to make the job easy. BeMailer (\$30, <http://members.aol.com/bemailer>) is a shareware app that can harvest and send unlimited messages via any email client, including AOL. The eFuse product from ie software (\$49.95, <http://software.iecan.com>) allows you to customize messages sent to a batch list of contacts, as well as construct messages based on text criteria. The bonus: It's Carbonized for OS X!

**Q** I want to segment my AppleTalk network into zones. Is there a way to do this in Mac OS X?

**A** AppleTalk usually gets a bad rap from network administrators, partly because the majority of them don't

understand it (sigh). But if you're looking to custom-configure your AppleTalk network on your own by segmenting it into zones, the easiest solution is to use a hardware router.

However, since you ask about setting up zones using Mac OS X—yes, it can be done, but the task is very tricky and involves editing a ton of files. Plus, you must have OS X Developer Tools installed. Thankfully, Apple has written an article (106453) that explains how to do the job step by step. You can pull the text from Apple's Knowledge Base Web site (<http://kbase.info.apple.com/cgi-bin/WebObjects/kbase.woa/wa/expert>) by selecting the Article Number button on the site and entering 106453 in the field (you'll need to sign up to get a free password if you haven't done so already). Best of luck, and make sure to work on backed-up copies, because things can go very wrong very fast.



**Apple's hefty Knowledge Base provides tons of invaluable info and is a must-visit for every Mac user.**



**Q** I use iTunes to transfer files to my Mac-connected MP3 player, but how can I sync my MP3 player's playlists with iTunes?

**A** If you have a supported player, it's simple: Download iTunes 2. You can thank the iPod's development for making Apple provide iTunes sync support for third-party players. Apple revamped iTunes 2 (free, [www.apple.com/itunes](http://www.apple.com/itunes)) to sync with the iPod. One of version 2's features is the ability to view and edit the playlists of any supported MP3 player—not just the iPod (check Apple's iTunes site for supported devices)—in iTunes.

Select Show Device Playlist from the Advanced menu in iTunes to bring up all of the playlists you created on your MP3 player in the iTunes window. From there, you can edit, create, and name playlists in the same way you do with the MP3 collection on your hard drive. Anyone who has ever tried to create a playlist on an MP3 player will send up a cheer for iTunes' latest addition.



Thank goodness! In iTunes 2, no longer do you have to peck at the little buttons on your MP3 player to create a playlist.

**Q** I love using iTunes to listen to streaming MP3s from various Web sites. However, I would like to be able to save these streams as files. I know that theoretically I could hook my Mac's audio out to the audio in and use an audio-capture program, but there has to be a cleaner method. Do you know a better way?

**A** Though the manual method you describe works just fine, you do have other options—but they're not easy. If you're running Mac OS X, use an Open Source freeware program called Streamripper (<http://streamripper.sourceforge.net>). This command-line utility compiles under Mac OS X and lets you save

a stream to a predefined file. This app is *not* for the novice user, but it's still a valid method.

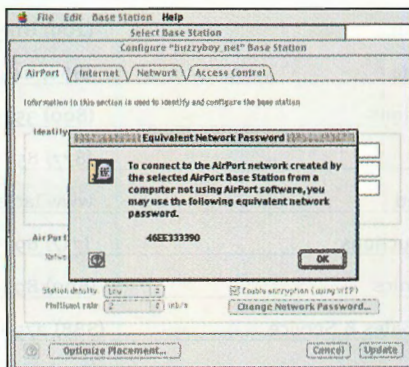
Another option is to try performing a little trick using Internet Explorer with iTunes. This method only works on some streamed MP3s with simple URLs, like the audio streams found at Web radio station Live 365 ([www.live365.com](http://www.live365.com))—be prepared for some trial and error. In iTunes, click the Radio Tuner and find a station you want to record from the list. Drag its name from the iTunes window to your desktop to create a generic URL document. Launch Internet Explorer and open the Download Manager. Then drag the URL file into the Download Manager window—hopefully Explorer will begin to download the current stream as a file. Again, this may or may not work depending on the URL address, but it's worth a try.

**Q** I have a password-protected AirPort network in my house, but my friends who have PC laptops and PowerBooks with non-Apple wireless cards can't connect to it. How can I give these machines access to my network?

**A** An AirPort Base Station coupled with AirPort-enabled Macs makes for a pretty sweet setup. If you set up your network without a password, anybody—and we do mean anybody—with an 802.11b card can access your network. A password provides security. The problem is that most

PC wireless apps can't understand these passwords—even the Mac WaveLan ([www.orinocowireless.com](http://www.orinocowireless.com)) PC Card software won't let you enter a password. What you need is the network encryption key, which will enable PCs to gain access to the network.

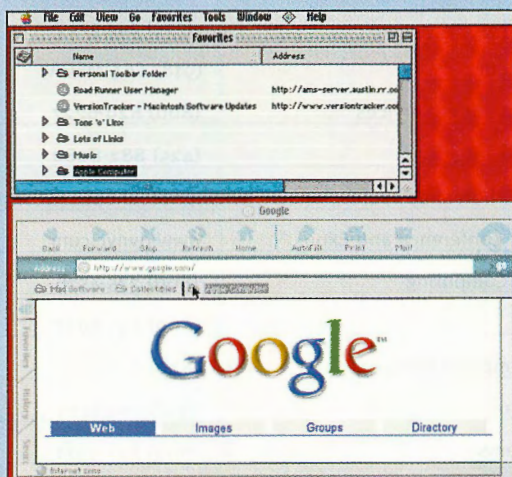
To get the encryption key, open Apple's AirPort Admin application and simply choose Equivalent Network Password from the Base Station menu. This key will offer your PC-using friends complete access, so choose wisely to whom you give out the password. If you have an Orinoco WaveLan PC card installed in your G3 or G4 PowerBook, don't bother installing the WaveLan software if you want to jump aboard an AirPort network. Instead, install Apple's AirPort software to gain access. However, in this situation, the AirPort software works only with Mac OS 9.x.



It's not as pretty as a password, but AirPort's encryption key protects you just as effectively.

## Internet Explorer Bookmarks—An Undocumented (and Unsolicited) Tip

In the November 2001 issue, we discussed ways to organize bookmarks in your Web browser. Reader George Guerrette brought to our attention a cool, undocumented bookmark tip for use with Internet Explorer. You can put bookmark folders into the toolbar at the top of your IE browser window by dragging a folder from the Organize Bookmarks window directly into the toolbar. There you go—organize away! Thanks, George!



Drag-and-drop page markers—way cool!



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168PIN 3.3v Mac DIMMs EDO 60ns



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72pin 32bit 60ns 2k Refresh SIMMs

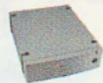
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PowerBook G4/667MHz model requires PC133 memory. All other listed models are compatible with PC100 or PC133 memory.

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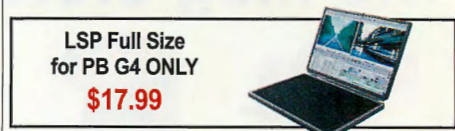
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APS ST 36GB Ultra160 LVD	15,000	—	789.95
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APS ST 180GB Ultra160 LVD	7200	—	1,789.95

Drives listed above carry a five-year warranty, except those marked.

† Marked drives carry a three-year warranty.

### APS Ultra SCSI Drives

Model	RPM	*Internal	APS Pro2
APS ST 18GB Ultra SCSI	7200	\$199.95	\$249.95

Drives listed above carry a five-year warranty.

\* Internal configuration does not include a mounting bracket. Intended as a replacement internal SCSI drive.



**\$329.95**

## LaCie 30GB PocketDrive™

- Powerful, pocket-sized hard drive
- U&I technology — FireWire and USB ports
- Mac and PC compatible

### LaCie PocketDrives

Model	RPM	Price
LaCie 10GB PocketDrive	4200	\$219.95
LaCie 20GB PocketDrive	4200	249.95
LaCie 30GB PocketDrive	4200	299.95
LaCie 40GB PocketDrive	5400	449.95
LaCie 48GB PocketDrive	5400	669.95

### LaCie PocketCD-RW

Model	Price
LaCie 8x4x24 PocketCD-RW	\$279.95



**\$189.95**

## APS 40GB USB Hard Drive

- 5400 rpm hard drive
- Hot-swappable
- Convenient USB interface
- Affordable storage

### APS USB Hard Drives

Model	RPM	APS Pro2
APS 40GB USB Hard Drive	5400	\$189.95
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APS 80GB USB Hard Drive	5400	269.95



LaCie electron22blue III

**\$999.95**

## LaCie electronblue III monitors

- High dot pitch minimizes eye strain
- Maximum resolution for large layouts
- Advanced flat-screen technology eliminates distortion
- Color-enhancing blue hood reduces glare

### LaCie monitors

Model	Dimension	Price
LaCie electron19blue III	19" Diagonal	\$399.95
LaCie electron22blue III	22" Diagonal	999.95



**\$49.95**

## LaCie Pocket Floppy Disk Drive

- Widely-compatible standard USB interface
- Plug and play convenience
- Ultra-thin, portable design

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- APS Tech's warranty is a pass-through of the mechanism manufacturer's warranty which will be serviced by APS Tech. APS Tech warrants APS Tech branded enclosures, brackets and power supplies, and will, at its discretion, replace or repair products found to be defective according to the specific terms of the warranty accompanying the product.
- Refused orders subject to 20% restocking fee.
- International customers must pay for all shipping charges.
- Prices and specifications are subject to change without notice.
- Not responsible for typographical errors.
- Your APS Tech Drive unit may contain one or more components that were in prior use, but which have been inspected and repaired or rebuilt as necessary. These components, if any are covered by the same warranty provisions, exclusions and limitations to the same extent, and on the same terms as otherwise "new" components.
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- One FireWire® port; two USB ports
- AirPort Card slot
- Up to 5 hours of run time

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The Apple Titanium PowerBook G4™ redefines portable computing. With a titanium exterior, one of the lightest and most durable metals, the PowerBook G4 is only 1 inch thin and weighs just 5.3 pounds. It offers powerful features, including a slot loading DVD-ROM drive and a stunning 15.2 inch display.

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- AirPort Card included with 667MHz model
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You can choose from three super models: the dual processor 800MHz Power Mac G4 with SuperDrive, 867MHz Power Mac G4 with SuperDrive or the 733MHz Power Mac G4 with a CD-RW.

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- Two FireWire® ports; two USB ports
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### PowerBook G4 Accessories

#354864	PowerBook G4/iBook 2001 AC Adapter	\$79
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#959646	iBook 2001 Additional Battery	\$129
#953968	Apple Pro Keyboard	\$59
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**“In the office or on the road, the Titanium PowerBook G4 has plenty of power to run all the programs I use—Excel, PowerPoint, QuarkXPress and even Photoshop!”**

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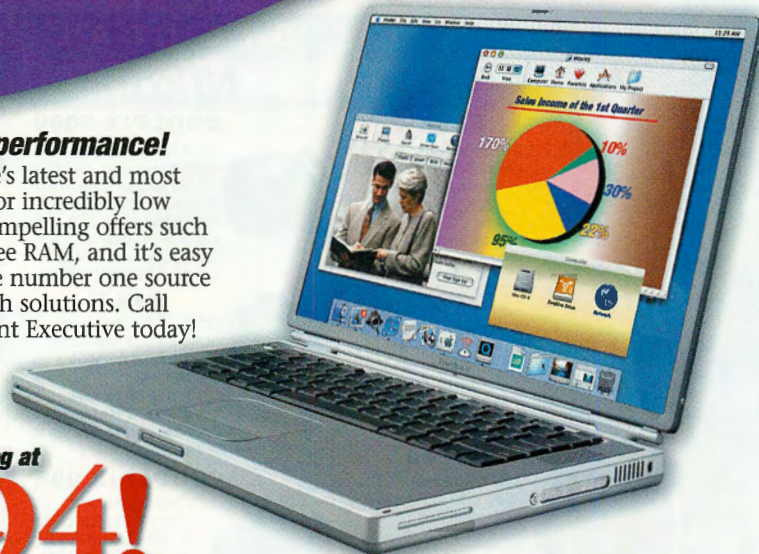
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Order	MHz	RAM	FREE RAM	TOTAL RAM	Hard Drive	DVD Drive	56K Modem	USB Ports	FireWire Ports	iMovie 2	iTunes	Price!	or as low as
#964260	550	128MB	128MB*	256MB	20GB	Yes	56K	Two	One	Yes	Yes	\$2,194*	\$62/mo*
#964262	667	256MB	256MB*	512MB	30GB	Yes	56K	Two	One	Yes	Yes	\$2,994*	\$84/mo*

\*Own a Titanium PowerBook G4 for as low as \$62/month with the **New MacMall EZ Payment Plan!** Call for details.

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#961579	733	128MB	256MB*	384MB	40GB	1MB L2	Yes	CD-RW	Yes	NVIDIA GeForce2 MX	\$1,694*	\$48/mo*
#961580	867	128MB	512MB*	640MB	60GB	1MB L2	Yes	SuperDrive	Yes	NVIDIA GeForce2 MX	\$2,494*	\$70/mo*
#961582	800 (Dual)	256MB	512MB*	768MB	80GB	1MB L3	Yes	SuperDrive	Yes	NVIDIA GeForce2 MX TwinView	\$3,494*	\$98/mo*

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#964285	600	128MB	256MB*	384MB	15GB	Yes	DVD-ROM	Two	One	Yes	Yes	\$1,494*	\$42/mo*
#964287	600	128MB	256MB*	384MB	20GB	Yes	DVD/CD-RW	Two	One	Yes	Yes	\$1,694*	\$48/mo*

\*Own an iBook 500MHz for as low as \$37/month with the **New MacMall EZ Payment Plan!** Call for details.

\*Professional installation fee of \$30 required for all free MacMall RAM offers.

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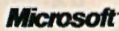


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\*2048 x 1536 Resolution  
\*32mm-96mm (35 Equiv)  
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\*2.5x Digital Zoom  
\*Continuous/Burst

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\*3x Optical Zoom  
\*2.5 Digital Zoom  
\*16Mb Smart Media card  
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\*Voice recording

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\*2272x1704 Resolution  
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Media Storage  
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\*3x Optical Zoom  
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\*1368 x 1024 Resolution  
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\*2.7x Digital Zoom  
\*Shutter Speed  
1/1000sec \*32Mb  
Smart Media Card  
\*High speed frame rate

**Nikon**

**COOLPIX-5000**



\*5.24 Megapixel, \*2560 x  
1970 Resolution, \*3x Zoom-  
Nikkor lens w/ wide angle  
28-85mm, \*256-Segment  
Matrix Metering, \*TTL White  
Balance, \*1/4000 sec. & 3-  
frames-per sec. \*32MB  
Compact Flash(TM) Card.

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\*D1X: \*5.33 Megapixel  
\*3008 x 1960 Resolution  
\*Continuous/ burst 3fps up  
to 9 images  
\*D1H: \*2.7 Megapixel  
\*2000 x 1512 Resolution  
Continuous/burst 5fps up to  
40 images

**COOLPIX 995**



\*3.34 Megapixel  
\*2048 x 1536 Resolution  
\*38 MM-152MM (35 Equiv)  
\*4x Optical Zoom Lens  
\*1.25-2.5x Digital Zoom

**COOLPIX 885**



\*3.14 Megapixel  
\*2048 x 1536 Resolution  
\*3X Optical Zoom  
4x Digital Zoom  
\*16Mb Compact flash

**FUJIFILM**

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\*4.3 Megapixel  
\*2400 x 1800 Resolution  
\*3x Optical Zoom  
\*3.75x Digital Zoom  
\*PC-Camera for internet  
video conferencing

**FINE PIX 6800**



\*3.3 Megapixel  
\*5 Frames per second  
\*USB Hot Sync  
\*Video conferencing

**FINE PIX 6900**



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\*35mm-210mm (35 Equiv)  
\*6X Zoom  
\*5 Frame Burst Mode  
\*Manual focus ring  
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\*Exclusive Super CCD  
Technology  
\*5 Exposure modes  
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\*3.76 Megapixel  
\*37 mm - 111 mm  
(35 Equiv)  
\*3x Zoom lens

**SONY**

**CYBERSHOT F707**



\*4.92 Megapixel  
\*38 mm - 190 mm  
(35 Equiv)  
\*5x Digital Zoom  
Lens

**DSC-S85**



\*4.1 Megapixel  
\*2272 x 1704 Resolution  
\*34mm-102mm  
\*3x Optical Zoom  
\*2x Digital Zoom  
\*16 Mb Memory Stick

**MVC-CD300**



\*2048 x 1536 Resolution  
\*3x Optical Zoom Lens  
\*2x Digital Zoom  
\*2.5" TFT LCD  
\*Voice Mode

**DSC-S75**



\*3.34 Megapixel  
\*3x Optical Zoom  
\*8MB Memory Stick  
\*HQ Movie Mode  
\*2" Color Lcd  
\*Spot Metering  
\*Variable ISO

**DSC-P3**



\*2.76 Megapixel  
\*1920 x 1440 Resolution  
36 MM fixed lens  
\*Continuous/Burst  
\*8MB Memory Stick

**DSC-P5**



\*3.34 Megapixel  
\*2048 x 1536 Resolution  
\*3x Optical Zoom  
\*6X Digital Zoom  
\*39-mm-117mm F2.8  
\*8MB memory stick media

**MVC-FD97**



\*2.1 Megapixel  
\*10X Optical Zoom  
\*39-390MM (35 Equiv)  
\*Stores Pictures on Disc

**Kodak**

**DX-3215**



\*1.3 Megapixel  
\*1280 x 960 Resolution  
\*3X Optical Zoom  
\*2X Digital Zoom  
\*8 Mb internal memory

**DX-3500**



\*2.2 Megapixel  
\*1800 x 1200 Resolution  
\*3x Digital zoom  
\*8Mb Internal Memory  
\*Optical view finder

**DX-3600**



\*2.2 Megapixel  
\*8MB Internal Memory  
\*Optical Viewfinder  
\*2X Optical Zoom  
\*3x Digital Optical  
\*Fixed Focusing  
\*Auto Exposure

**Canon**

**POWERSHOT G2**



\*4.1 Megapixel  
\*34 mm - 102 mm (35 Equiv)  
\*3x Zoom Lens  
\*Built-in flash  
\*Built-in high speed USB  
interface

**Pro 90 IS**



\*3.3 Megapixel  
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\*10x Zoom Lens

**EOS D30**



\*3.11 Megapixel SLR  
\*3 Frames Per Second  
\*Histogram Displayed w/Each  
Shot \*13 Custom Function  
\*Easy Controls  
\*High Quality Still Images

**POWERSHOT S-300**



\*2.11 megapixel  
\*3x Optical Zoom  
\*Smallest Digital Camera  
\*Direct Print with CP-10  
Printer, \*Records Movie  
Clips & Audio

**EOS 1D**



\*4.86 Megapixel  
\*2464 x 1648 Resolution  
\*28.7mm x 17.8mm (35 Equiv)  
\*1/16000 Sec. \*EOS EF  
lens mount, \*Compact flash

**POWERSHOT S110**



\*2.1 Megapixel  
\*1600 x 1200 Resolution  
\*35mm-70mm (35 Equiv)  
\*2x Optical Zoom  
\*4x Digital Zoom  
\*8Mb Compact Flash I  
\*Digital Elph  
\*Smallest Digital Camera

**POWERSHOT S30**



\*3.14 Megapixel  
\*35 mm - 105 mm  
\*3x Zoom lens

**POWERSHOT S40**



\*4.0 Megapixel  
\*2272 x 1704 Resolution  
\*3x Optical Zoom  
\*3 Point auto-focus  
\*13 Shooting modes

**MINOLTA**

**DIMAGE 7**



\*5.24 Megapixel  
\*Wide-angle 7x Optical Zoom,  
\*4x Electronic magnification  
(Macro), \*Precise autofocus  
and auto exposure, \*Built-  
in flash with ADI meter-  
ing, \*Compact Flash(TM)  
Card

**DIMAGE 5**



\*3.34 Megapixel  
\*2048 x 1536 Resolution  
\*7.1x Optical Zoom  
\*35-250mm F2.8-F8.0  
(35 Equiv), \*2x Digital  
\*16m Compact Flash(TM)  
Card



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- \*3.5" LCD view screen
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- PV-DV951: 3.5" LCD, 3 CCD, 1.6 Million Pixels, Digital Effects (Adds effects to videos)



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### PV-DV201/401/601/701

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- PV-DV401: 3" LCD, Color Viewfinder, Magic VU IR Filter
- PV-DV601: 3" LCD, Color Viewfinder, Analog-In, Built in light
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- ZR-30MC: Digital Stills, Advanced accessory shoe



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- \*Zeiss lens 10x Optical
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- \*Steadyshot Stabilizer
- \*2.5" Color LCD 184k Pixels
- \*640 x 480 VGA
- Digital Still on Memory Stick



**FREE Case & Tripod**

### DCR-PC110

- \*Zeiss lens (10x Optical, 120x Digital)
- \*1/4" CCD 1074k Pixels, Steadyshot Stabilizer, 2.5" Color LCD 200k Pixels, 1152 x 864 VGA
- Digital Still on Memory Stick



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### DCR-TRV900

- \*Progressive scan CCD, 12x Optical, 48x Digital Zoom, \*Optional Laser Link Capability, \*Digital Still Picture Capability



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### DCR-TRV 17/30

- TRV17: \*10X Optical \*120X Digital \*Steadyshot Stabilization \*Analog Recording Capability \*USB Connection \*Laserlink Wireless Connection
- TRV30: 1.5 Mega Pixel Imager, \*1360x1020 Digital Still Images, \*Intelligent Pop Up Flash



### DCR-TRV730/830

- \*1/4" CCD 1,070k Pixels, \*18x Optical 500 Digital Zoom, Super steadysight stabilization, 12 bit/16 bit PCM Digital stereo
- TRV830: Also comes with portable Dye-Sub Color Printer



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- TRV330: 2.5" LCD, 61k Pixels, Digital Still w/Memory Stick
- TRV530: 3.5" LCD, 123k Pixels, Digital Still w/ Memory Stick



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P-330In Stock P-200In Stock

## Nikon

### Coolscan 8000ED



- \*Multiple film format (120/220, 35mm, 16mm, and Microscope)
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- \*NEW! Applied Science Fictions Digital ICE3 (TM) Image Enhancement \*Technology incorporating Digital ICE(TM), Digital ROC(TM) and Digital GEM(TM)



### Coolscan 4000ED

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## MINOLTA

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- \*Digital Ice (Image correction and enhancement)
- \*Digital Foc (Reconstruction of color)
- \*Digital Gem (Grain equalization and management)
- \*4800 DPI (Max) Super high resolution
- \*16-Bit A/D Conversion



### Dimage Scan Elite

- Scans 35mm sleeves and mounted, positive and negative films in color and B/W Optional Aps adapter is available, 2,820 dpi optical resolution, 3.6 wide dynamic range, 12-bit producing 36-bit color, Digital ICE correction Enhancement, Adobe Photoshop LE included, Available for Mac and Windows

Scan Dual II ...In Stock Scan Multi II ...In Stock

## Canon

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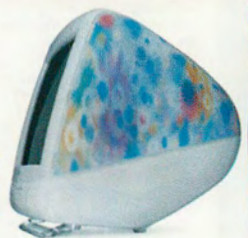
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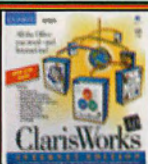
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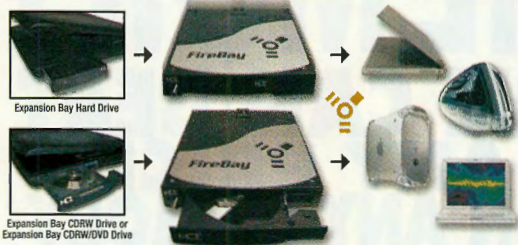
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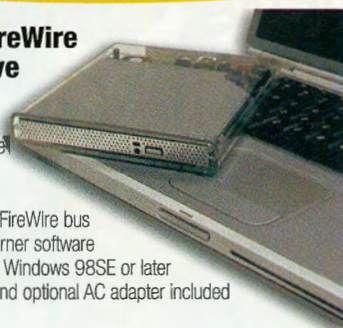
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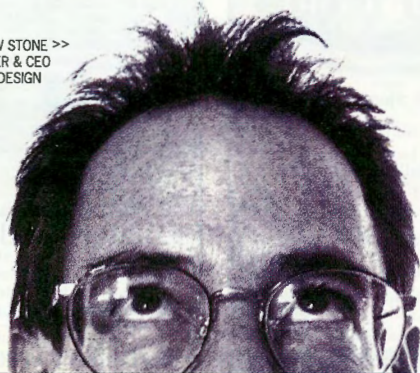
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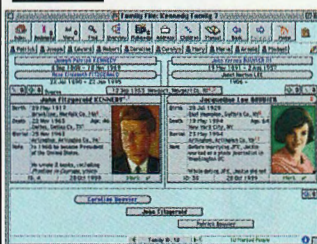
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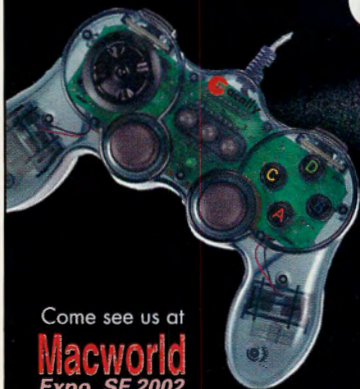
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# Phrazer

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No music practice is required! With Phrazer you can drag and drop audio phrases into a timeline window. Within minutes you can create entire songs! Phrazer's new QuickTime™ movie support makes it the perfect personal video soundtrack factory for iMovie™ or FinalCut Pro™!

Powerful pitch and tempo matching algorithms, a loop editor, plug-in digital effects, and real-time MIDI control will get you into the loop & keep you in the groove!



## Phrazer Features

- Import Acid™ 1 & 2 loop libraries
- Merge Phrazer mixes with QuickTime movies using selectable compression types for output
- 300 MB of all new 'Phrazerized' loops included
- Assign multiple loops with effects on each track
- Get maximum performance with G4 optimization
- Gate tracks using QWERTY keyboard or MIDI controller
- Use ASIO, DirectConnect, MAS, ReWire, or Sound Manager
- Render or Record entire mixes to disk as AIFF or WAV
- Play loops from hard-disk or load into RAM
- USB MIDI support for Roland PC-300

BitHeadz Inc. 2850 South County Trail, Ste 1  
East Greenwich, Rhode Island 02818 USA  
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Expo no-nos and no shows.



MAC Cosmetics: A reliable source tells us Steve Jobs is no fan of makeup. Really. Don't ask...



Big Mac: It's not beefy enough to warrant an Expo showing, but ardent fans can buy this popular product just a few blocks away.



Macintosh apple: The Expo is only big enough for one Apple.

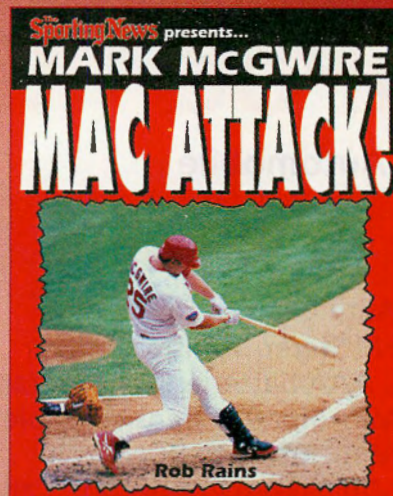
## Macs You Most Likely Won't Find at Macworld Expo



Kraft Easy Mac: Two words—too cheesy.



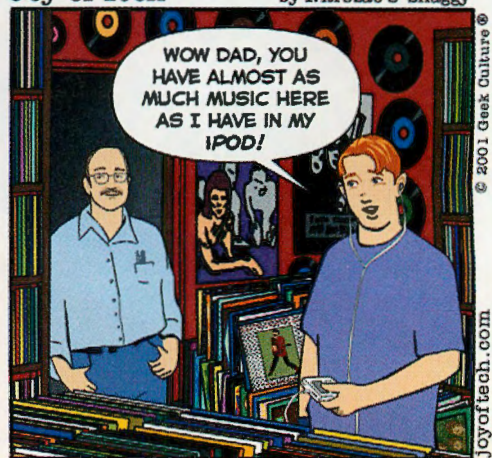
Mac Daddy and Daddy Mac, aka kid rap duo Kris Kross: Since their 1991 hit album *Totally Crossed Out*, this twosome has gone the way of System 7.



Mark "Big Mac" McGwire: It's pretty obvious that McGwire isn't going to the Expos—he's retired.

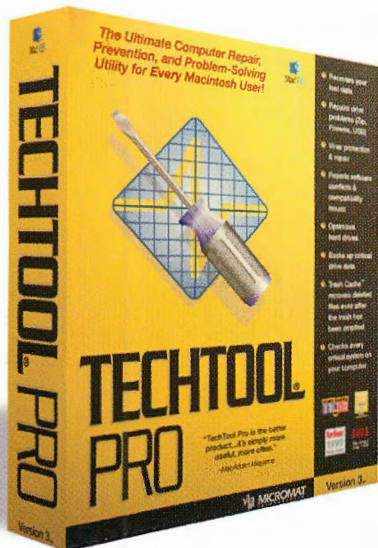
### Joy of Tech

by Nitrozac & Snaggy





## In with the new...



TechTool Pro 3 is the super utility for your Macintosh. Besides repairing and recovering data, TechTool Pro can help you circumvent problems in the first place. Our new virus detect and repair feature, as well as our software conflict check feature, lets you keep your computer in tip-top shape. When booted from the included emergency CD, you can even check, repair and optimize your OS X computer.

Every day, more and more Macintosh professionals are choosing TechTool over other system utilities. In fact, even Apple Computer includes TechTool Deluxe with every copy of their AppleCare™ Protection Plan. Simply put, TechTool Pro 3 is the most complete and powerful troubleshooting utility available for your computer. Why would you settle for anything less?

## In with the newer...



For Apple's next-generation operating system, you'll need a next-generation disk utility. That's why Micromat has introduced Drive 10, the first and final disk utility for Mac OS X. Problems with your drive? Drive 10 can repair almost any drive problem with one simple click of your mouse. All within OS X's native environment.

While Drive 10 is a new product, it is derived from TechTool Pro, Micromat's world-class diagnostic and repair utility. Using TechTool's time-tested routines as well as some new routines developed exclusively for OS X, Drive 10 offers many tools for checking and repairing any drive on your system. Don't entrust your OS X drive to ancient utilities. Protect your data and drive safely with Drive 10.



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How to replace beverage glasses with broccoli:

1) Using your pen for ease and control, draw a path around your broccoli. Then copy your selection.



2) Draw a pen path around the area where the broccoli will cover the glass.

Exclude the fingers in front of the glass.

3) Paste your broccoli into the selection.

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